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RAIL CLASSICS

PASSENGER TRAIN SPECIAL

CHALLENGE PUBLICATIONS, INC.

FALL 1979

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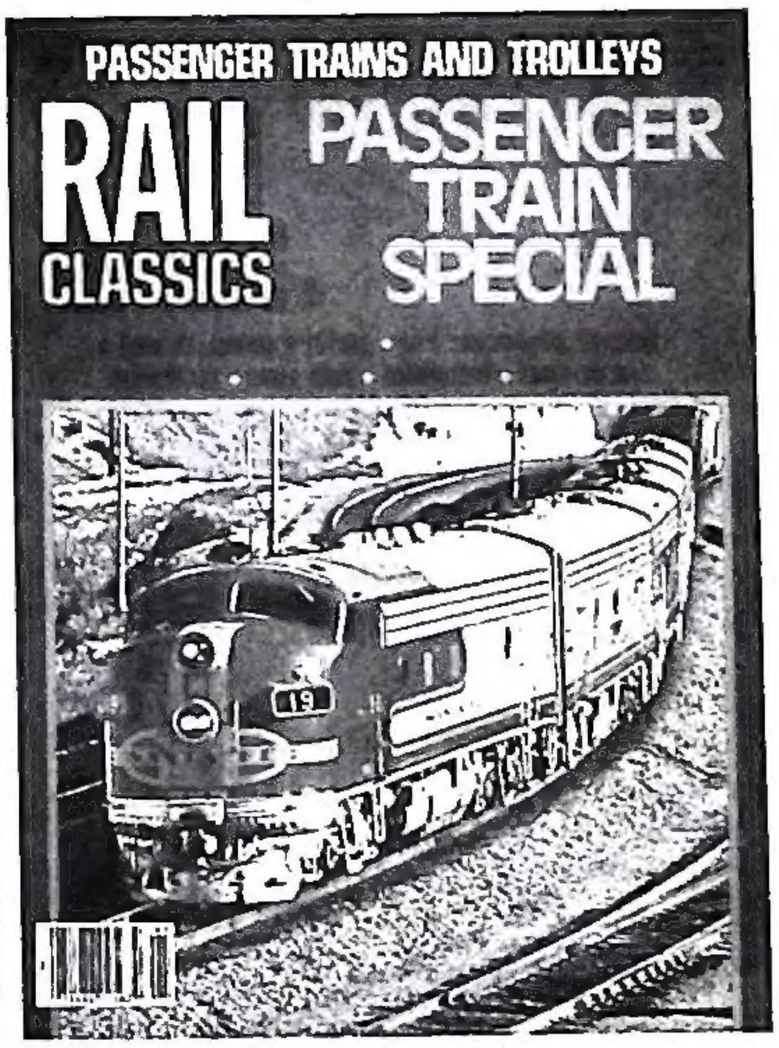

COVER—Santa Fe's passenger Fs move through Cajon Pass. Tom Gildersleeve photo.

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By Ed Stauss

In eight years, Amtrak has accomplished what it set out to avoid.

LESS TRACK FOR AMTRAK?

California surf washes near the Amfleet equipped SAN DIEGAN heading for San Diego. Donald Duke

NATIONAL LIMITED pushes 60 mph at tower near Newport, Pennsylvania. John Taibi

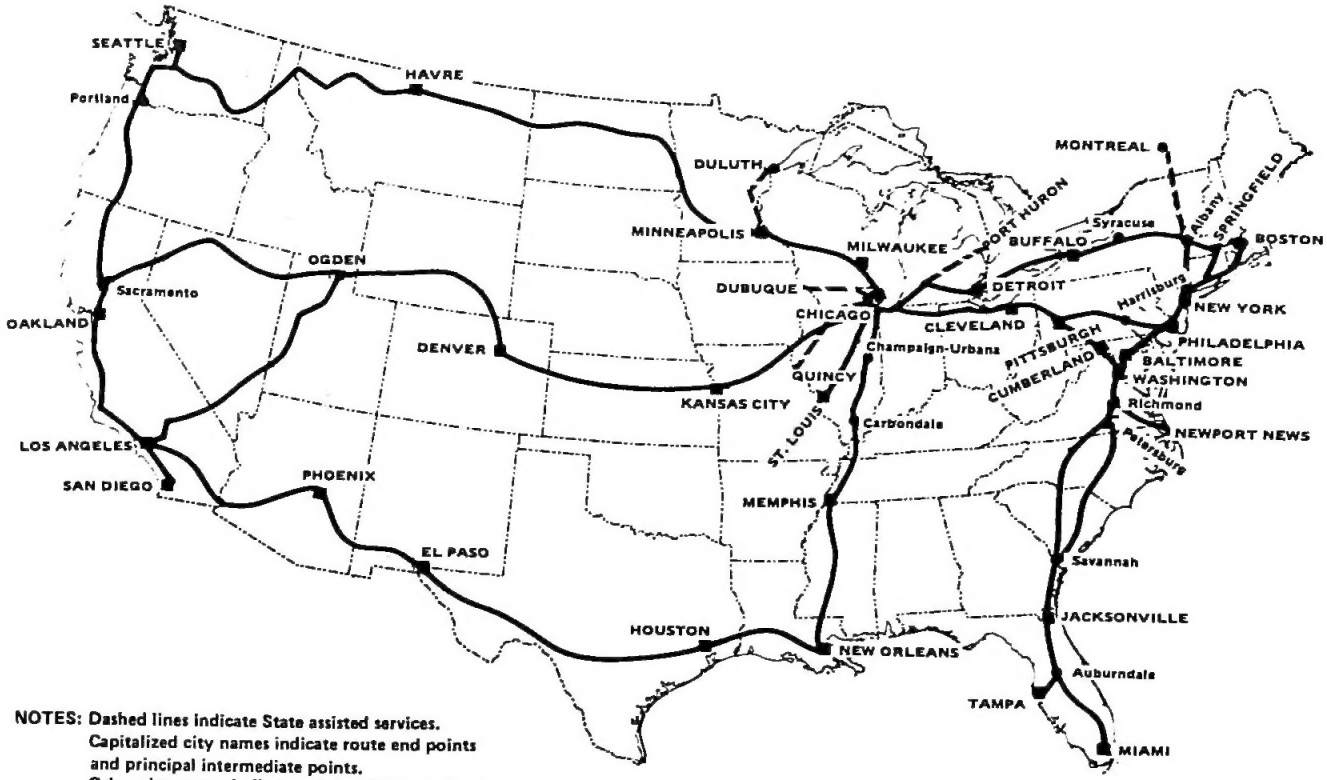
History seems to be repeating itself on an eight year cycle. Before May, 1971 we didn't have Amtrak and the free-enterprise railroads were either killing off passenger trains with intentional poor service (if you asked the passengers) or being abandoned by passengers in droves (if you asked the railroads). Whatever the cause, the solution we all (Congress) agreed to was to prune away the weaker trains, consolidating the stronger route segments into one national system which it was hoped would all begin to pursate together, breathing fresh life into the nation's passenger trains. Certainly within five years, if not in the first year, passengers would swarm back to the trains. Planes would stop flying and all the musty dark train stations from Chattanooga to Cucamonga would begin to look like World War II again. Or so we hoped.

If you're still living in 1971, I have some bad news for you. Gazing into my crystal ball, I look ahead to January 31, 1979 where I see and hear Secretary of Transportation Brock Adams recommending a "streamlined national network" of passenger trains. This time it will be a 43 percent cut in route miles, somewhat similar to 1971 when 45 percent of the trains were discontinued. If you didn't like 1971, you'll hate 1979!

For the passenger railfan, the outlook in 1979 is especially bleak. Back in 1971, the loss of over 100 trains was softened by the anticipation of all the spectacular things Amtrak was expected to do. Now the mystique is gone as Amtrak has established a track record which is clearly downward.

"Virtually all of the trains that I have proposed to be discontinued," said Secretary of Transportation Brock Adams, "are long-distance trains that consume large amounts of fuel to pull the dining, lounge and low-density sleeping cars found on that kind of train." According to Adams, the trains proposed for discontinuance are not needed to meet

RECOMMENDED AMTRAK ROUTE SYSTEM



NOTES: Dashed lines indicate State assisted services.
Capitalized city names indicate route end points and principal intermediate points.
Other city names indicate points within routes at which some trains turn or diverge.

any future energy emergency and carry relatively few passengers.

The streamlined Amtrak would save $1.4 billion during the next five years while continuing to serve 91 percent of the current riders. Even if Amtrak patronage tripled — the maximum increase which could possibly be handled by the present equipment — Amtrak would still transport less than 1 percent of the nation's intercity travelers.

The recommendations were developed under population and market criteria set by Congress. President Carter's home state of Georgia will lose virtually all rail passenger service and four of the six trains serving Brock Adams' home state of Washington are also to be eliminated.

The new route structure will serve 22 of the nation's 25 largest cities and 39 of the 50 largest. While it will provide a 23 percent saving from the $718 million appropriation that would be required to maintain the current system through 1980, it is still subject to question. When scaled down, the appropriation will still be $552 million per year yet three of the nation's 25 largest cities won't receive service.

It's hard to imagine Albuquerque without a passenger train. The location of its downtown moved to be near the Santa Fe station when the first train arrived in 1880, leaving an "old town" two miles away. When Santa Fe was running its *Super Chief,* the advertising motif was of New Mexico. There was an extra long stop at Albuquerque so travelers could buy Indian beads and jewelry.

Even bigger population centers being abandoned by Amtrak include Dallas/Ft. Worth and Cincinnati/Dayton/Columbus in Ohio. Oklahoma City, Indianapolis and Louiseville will have only freight railroad service. No red and blue stripes either for Atlanta or Chattanooga. Whole states being dropped are Alabama, Oklahoma, Vermont, Arkansas and Nebraska.

Adams estimates only a 9 percent drop in ridership after the October cutback. However, the National Association of Railroad Passengers claims the 9 percent figure is unsupportable because neither Amtrak nor DOT have the data to predict the effect of the loss of feeder service into the remaining services. Just as the mighty Mississippi River would dry up if its tributaries ceased their flow, so might the New Orleans-Los Angeles *Sunset Limited* after the *Southern Crescent* connection to the

BEFORE AND AFTER COMPARISON

	Current System	Proposed System	Change
Route-Miles (Thousands)	27.7	15.7	−43%
Passengers (Millions)	19.6	17.9	− 9%
Passenger-Miles (Billions)	4.6	3.7	−19%
Passenger-Miles/Train-Miles	141.0	173.0	+23%
Cost in FY 1980 (Millions)	$ 949	$ 760	$ 189
Cost FY 1980-1984 (Millions)	$5,981	$4,590	$1,391

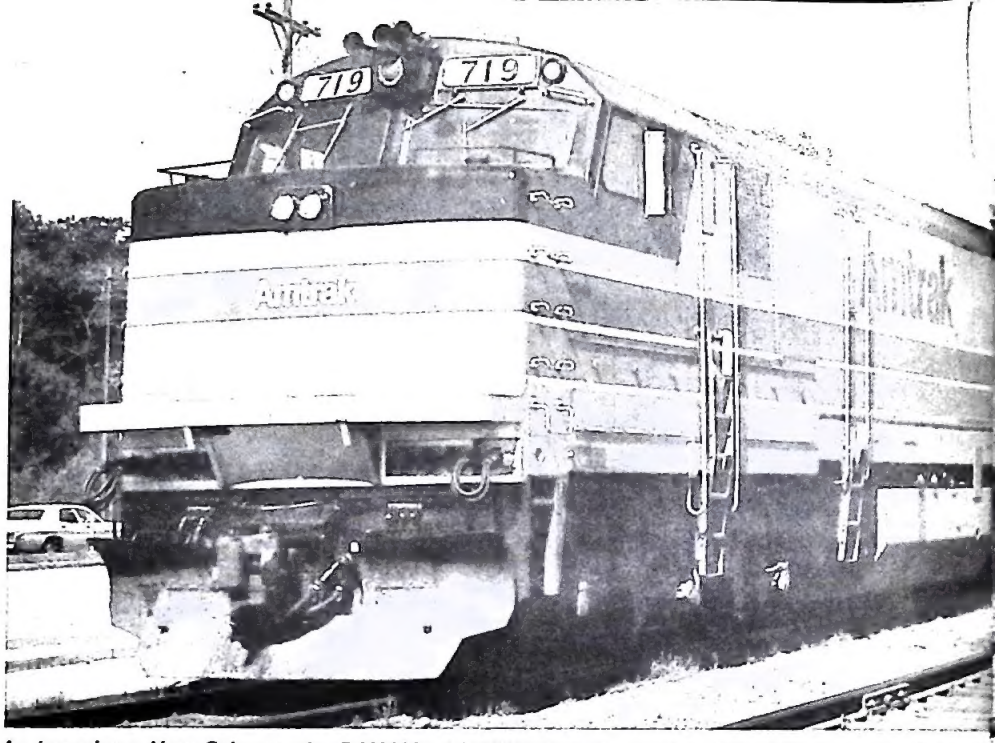
Costs include operating subsidy, capital, debt retirement, Northeast Corridor purchase payment and restoration of loan amounts used for previous Northeast Corridor purchase payment. The new system also includes funds for labor protection.

Transportation Department Figures.

east and connections to Dallas/Ft. Worth are gone.

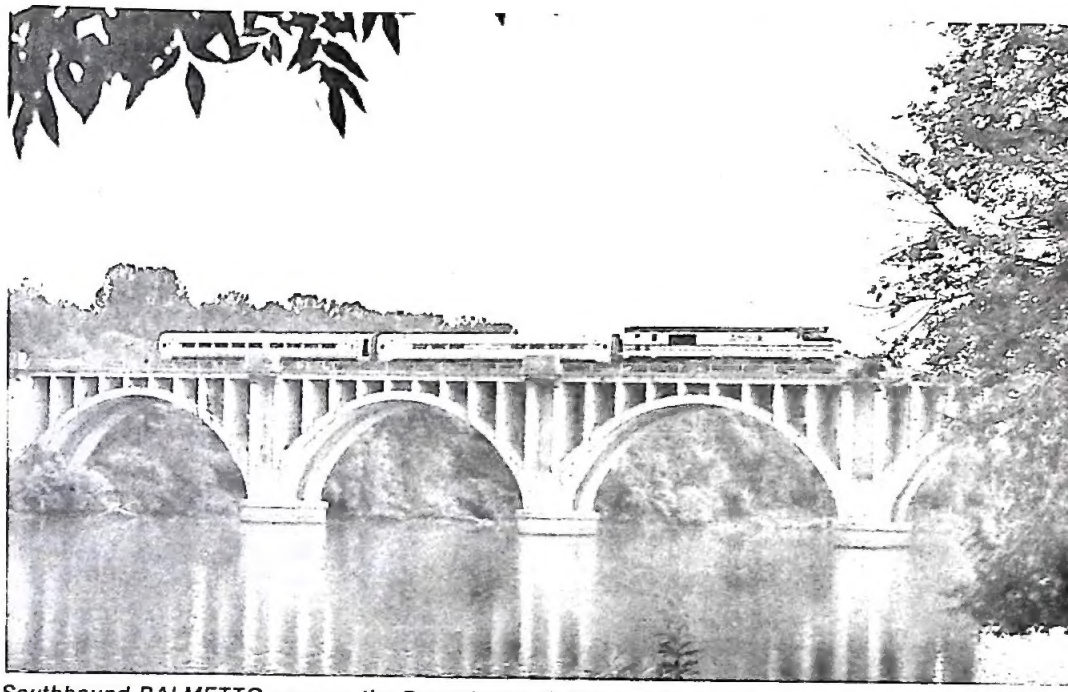
Also, says NARP, the 9 percent figure is misleading because it compares with existing ridership and not with the dramatically increased ridership which would occur if the system were left intact while major capital investments now paid for or approved go into place. As an example, many riders have flocked to the *San Diegans* and other trains immediately after Amfleet cars were placed in service. Now scheduled for this summer will be new Superliner cars on western trains, newly electrified cars in the East and all-weather maintenance facilities in Chicago. In short, NARP feels the cuts would hurt Amtrak just as it may be ready for a new increase in patronage.

Ridership has been steadily increasing over the entire Amtrak system, although at a slow rate. Typical system gains are 7.5 percent, recorded in December, 1978 over the



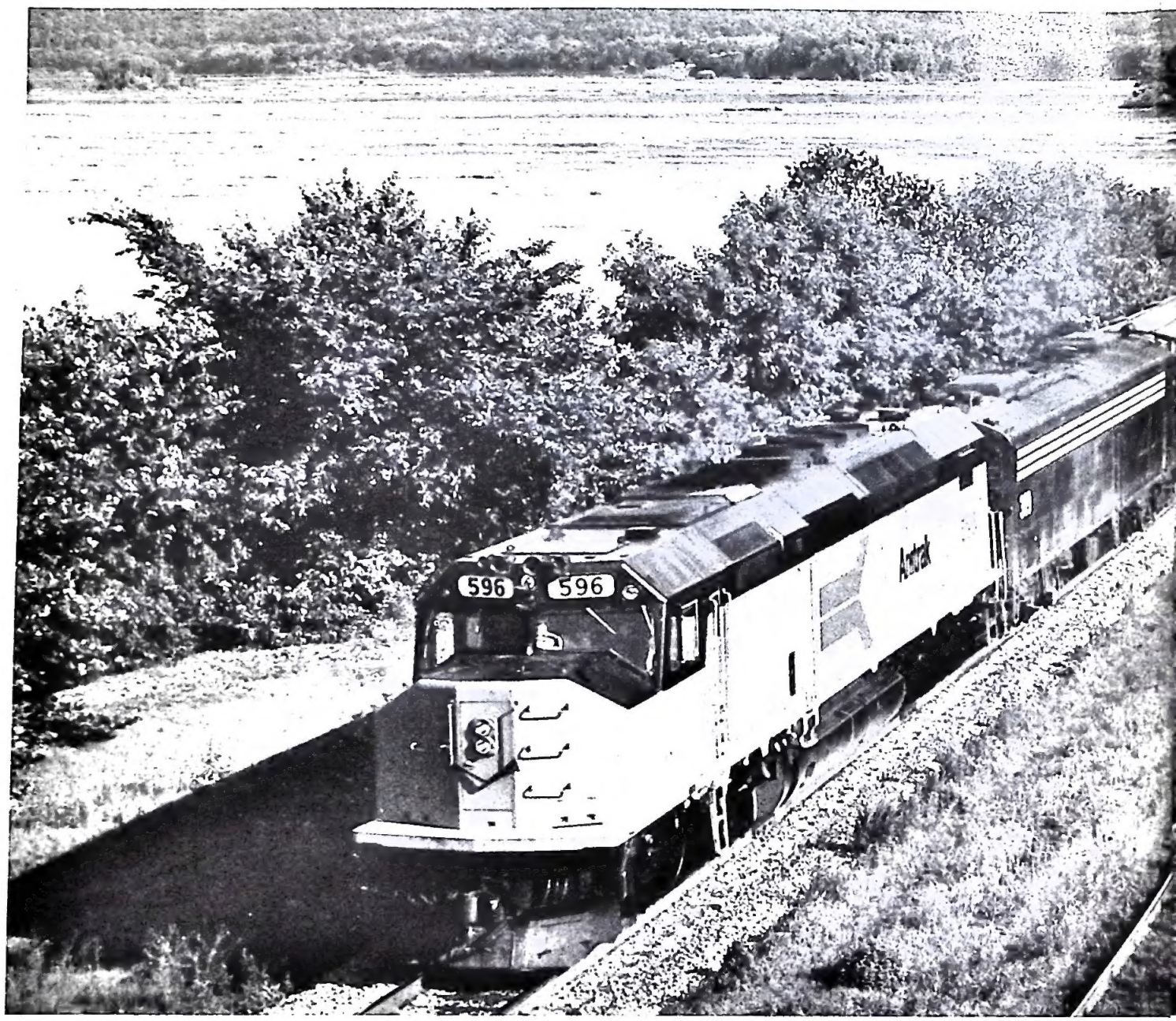
An hour from New Orleans, the PANAMA LIMITED is pulled by two P30 CHs. Joseph Oates

EMPIRE BUILDER detours via Savanna, Illinois. David Franzen



Southbound PALMETTO crosses the Rappahannock River at Fredericksburg Virginia.
Ron Johnson

Total running time for the BLUE RIDGE is only one-hour forty minutes between Washington and West Virginia Bill Rettberg



Conrail crews take the National Limited through Pennsylvania, but Missouri Pacific will end up the run into Kansas City. John Taibi

previous December. Some routes have had spectacular gains such as the 40.8 percent jump on the *San Diegans* and the 36.1 percent increase on the *Shenandoah.*

In no case can Amtrak service be cited as a necessity for survival of a community. Our national network of paved roads connects to all communities served by Amtrak. Most of these communities already are served by motor buses and Greyhound has officially announced their intention to add any bus services which might become necessary as the result of an Amtrak service reduction.

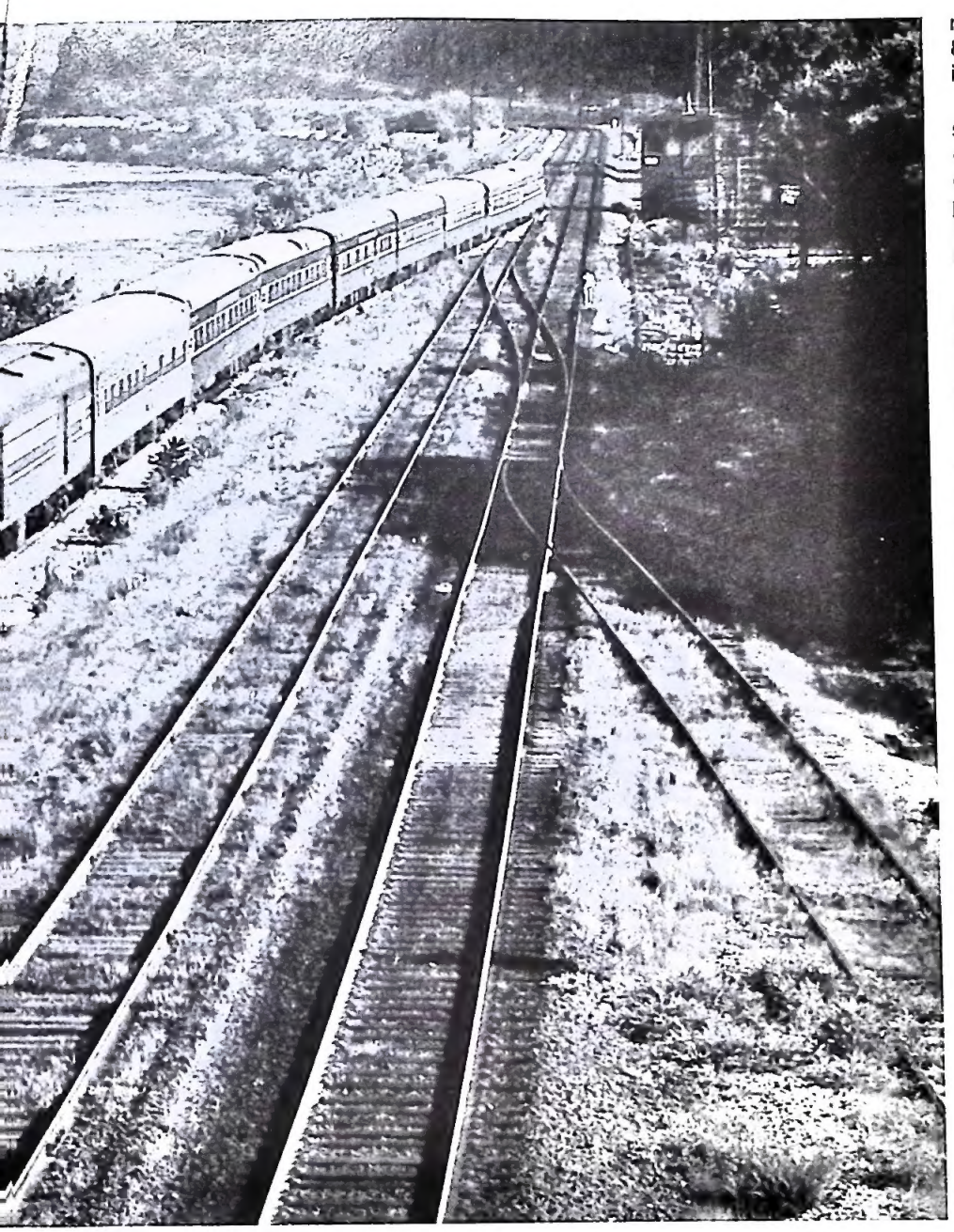
Many rail supporters sniff at the idea of riding a bus yet the bus usually offers better service — frequent departures, lower cost and more routes. What intercity buses do not offer are the amenities of rail travel. Trains let you sleep between sheets, relax in a lounge car, and eat fine meals at full speed. Since bus service is provided by free enterprise to over 15,000 communities, should the federal government subsidize train service to less than 500 of those same communities just to provide an added level of luxury?

This coming summer will be a great opportunity for a last fling at riding the Amtrak network as it has been. All present trains will be kept in service until October 1, 1979. On that date 14 trains are scheduled for discontinuance and six will be restructured.

Here's a rundown on the fourteen trains slated for discontinuance:

The Cardinal Washington-Chicago. Amfleet service departing Chicago at 9:55 am and Washington at 9:35 pm. Passes through Charleston, West Virginia and Cincinnati, Ohio. Operating railroad: C&O.

Champion New York-St. Petersburg, Florida. Departing New York at 4:45 pm it serves Philadelphia, Washington, Jacksonville, arriving at Florida's west coast at 7:32 pm, the



Days of GG-1 power on Amtrak are limited. Bill Rettberg

next day. Departs St. Petersburg 8:38 am on northbound trips. Operating railroads: Amtrak, RF&P, SCL.

Floridian Chicago-Miami. All-reserved sleeping cars and dome coaches all the way departing Chicago at 9:30 pm and Miami at 5:00 pm. Serves Louisville, Kentucky and Nashville, Tennessee. Operating Railroads: L&N, SCL.

Hilltopper Boston-Lynchburg, Virginia. Amfleet service with some unreserved seats departing Boston at 10:20 pm and Lynchburg at 3:25 pm. Operating railroads: Amtrak, RF&P, C&O, SCL, N&W, Southern.

Lone Star Chicago-Houston. All reserved hi-level coaches and conventional sleeping cars, departing Chicago 4:30 pm and departing Houston 7:10 am. Services Kansas City, Oklahoma City, Ft. Worth, Dallas. Operating railroads: ATSF, MP.

Montrealer Washington-Montreal. Amfleet coaches and conventional sleeping cars converted to electrical head-end power depart Montreal at 7:05 pm and Washington at 6:10 pm. Serves Vermont, Connecticut and New York. Operating railroads: CN, CV, B&M, Amtrak.

Mount Rainier Seattle-Portland, Oregon. Unreserved Amfleet service of three hours, 50 minutes departing Seattle at 5:30 pm and Portland at 8:30 am. Operating railroad: BN.

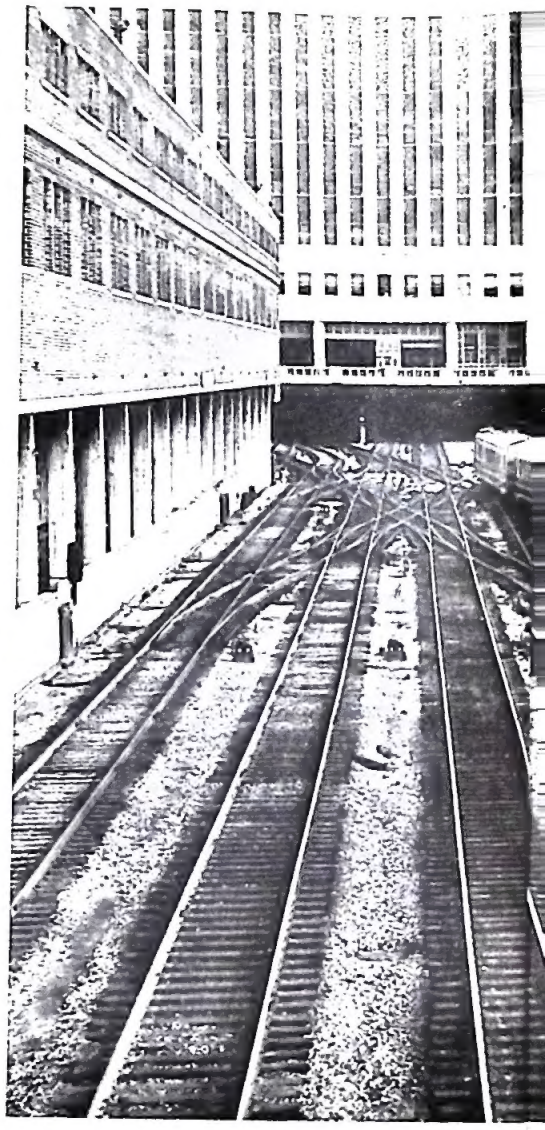
National Limited New York-Kansas City. Amfleet and sleeping cars departing New York at 4:55 pm and Kansas City at 7:45 am. Passes through St. Louis, Indianapolis, Columbus, Pittsburgh and Northeast corridor. Operating railroads: Amtrak, Conrail, MP.

North Coast Hiawatha Chicago-Seattle. Leaves Chicago at 11:30 am on Monday, Wednesday and Saturday and Seattle at 5:20 pm on Monday, Wednesday and Friday. Dome lounge cars all the way including Milwaukee, St. Paul/Minneapolis, North Dakota, Montana, and Spokane. Operating railroads: MILW, BN.

Pacific International Seattle-Vancouver, British Columbia. Unreserved Amfleet cars, no sleeping cars, depart Seattle 7:30 pm and Vancouver at 6:05 am. Schedule connects with Coast Starlight to Los Angeles. Operating railroad: BN.

Pioneer Seattle-Salt Lake City. Amfleet train over scenic west departs Seattle 7:10 am and Salt Lake City 11:25 pm. Operating railroads: UP, BN.

San Joaquin Oakland-Bakersfield, California. Amfleet train departs



Boarding a northbound San Diegan at PIONEER, seen at Boise, Idaho, may not run after October 1, 1979. Henry Griffiths

Conventional and Amtleet equipment meets at Los Angeles Union Passenger Depot.
Ed Stauss

Amtrak operates these French Turbo liners between Chicago and Milwaukee. Miles Moran

San Clemente, California, these passengers will be in Los Angeles in under an hour and a half. Ed Stauss

Bakersfield at 11:25 am and Oakland at 9:30 am. Bus connections at each end extend service into Los Angeles and San Francisco. Operating railroads: SP, ATSF.

Silver Meteor New York-Miami. Departs New York at 3:15 pm and Miami at 9:10 am. Duplicates route of the Silver Star which is continued. Operating railroads: Amtrak, RF&P, SCL.

Southern Crescent New York-New Orleans. Just after Amtrak took this train over from the Southern Railway, it will also be dropped. Amtrak has increased frequency to daily. Operating railroads: Amtrak, Southern.

The restructured routes are generally shorter or combined routings. Some new connecting routes are created. Looking at the restructures:

Broadway Limited New York-Chicago. Between Pittsburgh and Chicago, the Broadway Limited will be shifted north to pass through Cleveland and Toledo instead of smaller Ohio towns.

Inter-American Chicago-Laredo. A name change will be needed after the restructuring which deletes the route segment from St. Louis to the Mexican border at Laredo, Texas. Only 282 miles will remain of the 1449-mile route. Remaining service is all on Illinois Central Gulf. The deleted railroads will be MP, ATSF, and MKT.

Lake Shore Limited New York-Chicago. This train will be shifted out of Cleveland, passing through Canada (with closed doors) between Detroit and Niagara Falls. This train has operated entirely on Conrail.

San Francisco Zephyr/Southwest Limited. Chicago-Oakland/Los Angeles. Leaving Chicago the combined train will travel the route of the Southwest Limited to Kansas City. From Kansas City to Denver a new route will be created. From Denver, the train will follow the Zephyr route to Ogden where the Los Angeles train will split away, following a new route on Union Pacific through Las Vegas to Los Angeles. The Zephyr will continue its regular Amtrak route to Oakland. Although much is lost by this service reduction, one advantage will be the first full time Los Angeles-Las Vegas service since the beginning of Amtrak.

Shenandoah Washington-Cincinnati. Most of this route will be dropped. Remaining will be the short Washington-Cumberland section to be operated as part of the Broadway Limited.

NO MERGERS IN DAYTON

Years ago one young fan found the delight of private enterprise in the street railways of Dayton.

By Van Wilkins

To a young traction fan arriving in southwest Ohio in the summer of 1939, Cincinnati was the major attraction. Here was a large and apparently permanent street railway like those of the east, where he had formerly lived. He spent his spare time exploring and photographing it.

He knew that fifty miles to the north the city of Dayton had once been a major electric railway center, but that it had lost its last interurban when Dr. Thomas Conway's Cincinnati & Lake Erie discontinued operations south to Hamilton on May 13th, just before his arrival. Somehow a visit to what had been the focal point first of the vast Ohio Electric Railway and then of the C&LE seemed bound to be a disappointment.

When later in the summer he finally visited Dayton, he found a real surprise. An astonishing variety of electrics were still in operation.

In virtually every city of any size in the United States a process of consolidation of local transit systems was completed in the early 1900s. There were exceptions. Washington, D.C. had two major systems until the early thirties. In New York there were several large operations, but each was concentrated in one of two boroughs. And of course it was not until 1944 that the San Francisco Municipal Railway finally absorbed the Market Street Railway after 32 years of direct competition. But these were special circumstances. Only in Dayton did a large number of companies, each operating on as few as one and in no case more than four routes, avoid merger.

In 1939 there were still four companies providing local street car service. Two had been purely local for their entire existence, and two were the last remnants of abandoned interurbans. There were two other local transit lines, each with a single route, but these had already converted to trolley buses. Thus six companies were engaged in providing urban transit facilities to a city of perhaps 200,000!

Separate companies led to interesting variety in equipment. Cars had been acquired in lots of ten or fifteen, and in some instances by ones and twos, unlike the hundreds of cars built to a single design as happened elsewhere in the country. Even a standard design such as the "rubber stamp" lightweight car of the Cincinnati Car Company was present in several variations. At the same time, if one company bought a design which proved successful in Dayton service, others had not hesitated to adopt a good thing.

Not all companies used the common and logical system of designating cars serially. Instead, cars had been numbered by twos, fives, or tens, with odd and even numbers taking on added significance.

It was still possible to ride over former interurban trackage, yet one interurban, having cut back to purely city service, found it necessary to retain nearly half its former interurban line in a non-passenger carrying status so that its cars could reach the barn and shops.

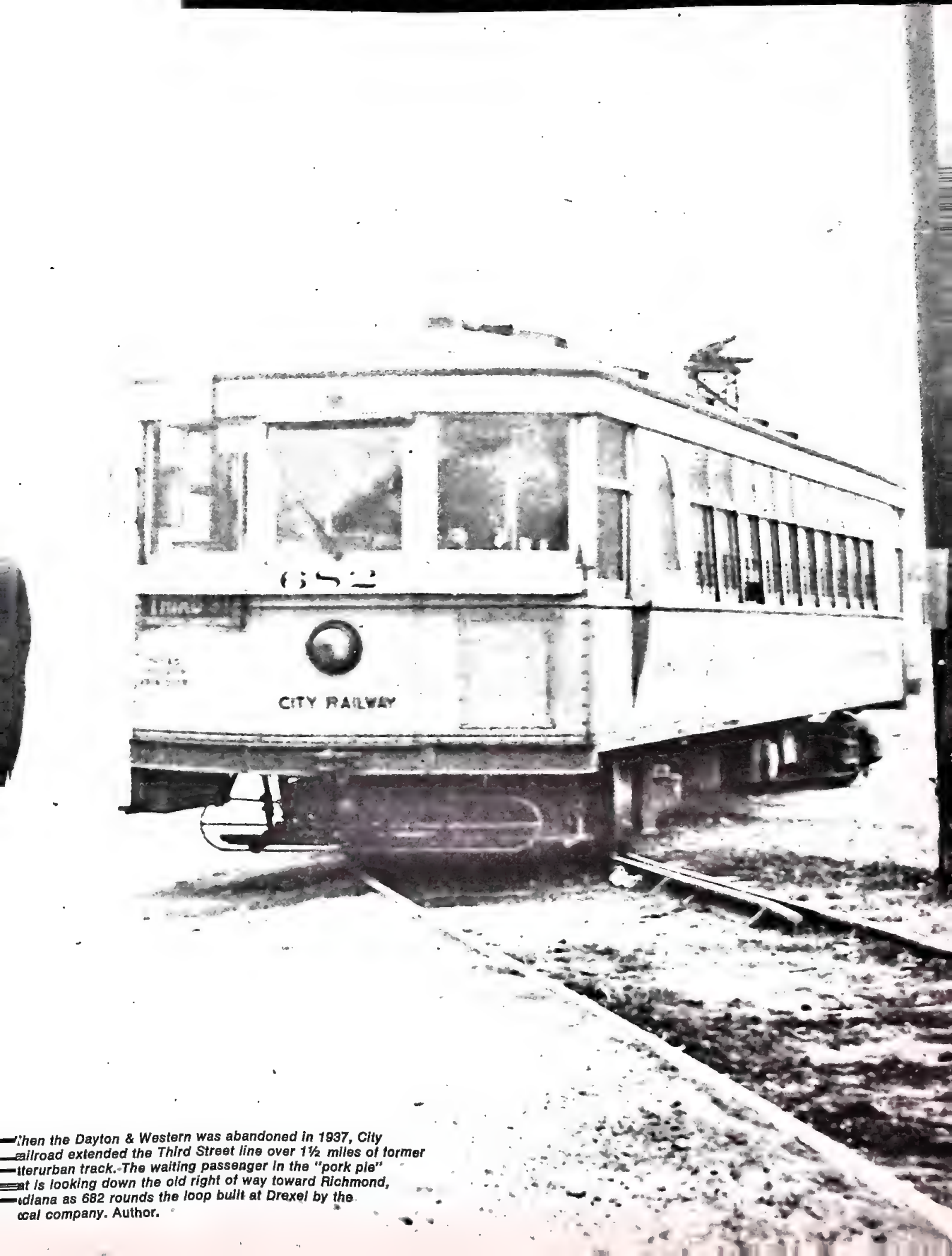
So, even though the true interurbans were gone, Dayton was still worth repeated visits.

The largest company was the City Railway. Of its four routes, one had been converted to trolley coach operation. The remaining lines for the most part were heavily traveled and used 25 Cincinnati "rubber stamps," along with 30 earlier products of the same company. The older cars dated back to 1913 and 1916, while the curved side "rubber stamps" were among the first of this unique design to be built, with the first batch arriving in 1922. All were painted an attractive yellow and cream color scheme.

Initially, most cars used in Dayton had been built by the local firm of Barney & Smith—already well known for their steam railroad passenger cars. City Railway had patronized Cincinnati since 1911, but there were a few very narrow-bodied Barney & Smith cars still on the property. Each visit to the barn would find more of them, along with the 1911 products of Cincinnati, in the process of being stripped and scrapped. One B & S car did survive until the end of service, used for excursions by the local fan group.

City Railway was relatively prosperous, and equipment was well maintained. This was the company which finally brought about full merger of local service, though this was not to be accomplished until 1956, long after the street cars were gone.

Peoples Railway had been the second largest system, though by 1939 there was only a single trolley route



When the Dayton & Western was abandoned in 1937, City Railroad extended the Third Street line over 1½ miles of former interurban track. The waiting passenger in the "pork pie" hat is looking down the old right of way toward Richmond, Indiana as 682 rounds the loop built at Drexel by the local company. Author.

left. Unlike the other Dayton lines, this company was controlled by Eastern interests, who at one time or another also had lines in such diverse places as Springfield, Ohio, Altoona and Scranton, Pennsylvania, Wilmington, Delaware, Lynchburg and Roanoke, Virginia, and Joliet, Illinois. With this one exception, operations in Dayton were virtually family affairs.

Peoples' cars were painted a rather elaborate red, orange, and brown, but were even more unusual in other respects. Ten, numbered in the 250-series, were Cincinnati products of 1917. Closely resembling 60 trailers built for the Cincinnati Traction Company in 1914, they were acquired to cope with crowds of World War I war plant workers. After the war, trailers were no longer needed, so they were returned to the builder and converted into powered cars. Experiments in other cities with such conversions were not especially satisfactory, but these ran in Dayton until the end of Peoples' rail operations.

There were also 20 cars built to the Stone & Webster "turtleback" design, though this was not a Stone & Webster property. In this case two builders were represented—Brill and St. Louis.

It was apparent that a decision had been taken for complete conversion of the system to trolley coaches. Two routes had already been converted in 1936 and 1938, and cars and track obviously were not maintained to the same standards as on City Railway. If one were to ride and photograph the line, it had to be done quickly.

There were two remnants of interurbans still providing city service. The Dayton & Xenia Railway originally had been one of a pair of competing interurbans between the two cities. They were merged, and one route was abandoned in 1908, the first major electric abandonment in the state. The remaining interurban route ran until 1937, after a branch to the hamlet of Spring Valley was cut back in 1917.

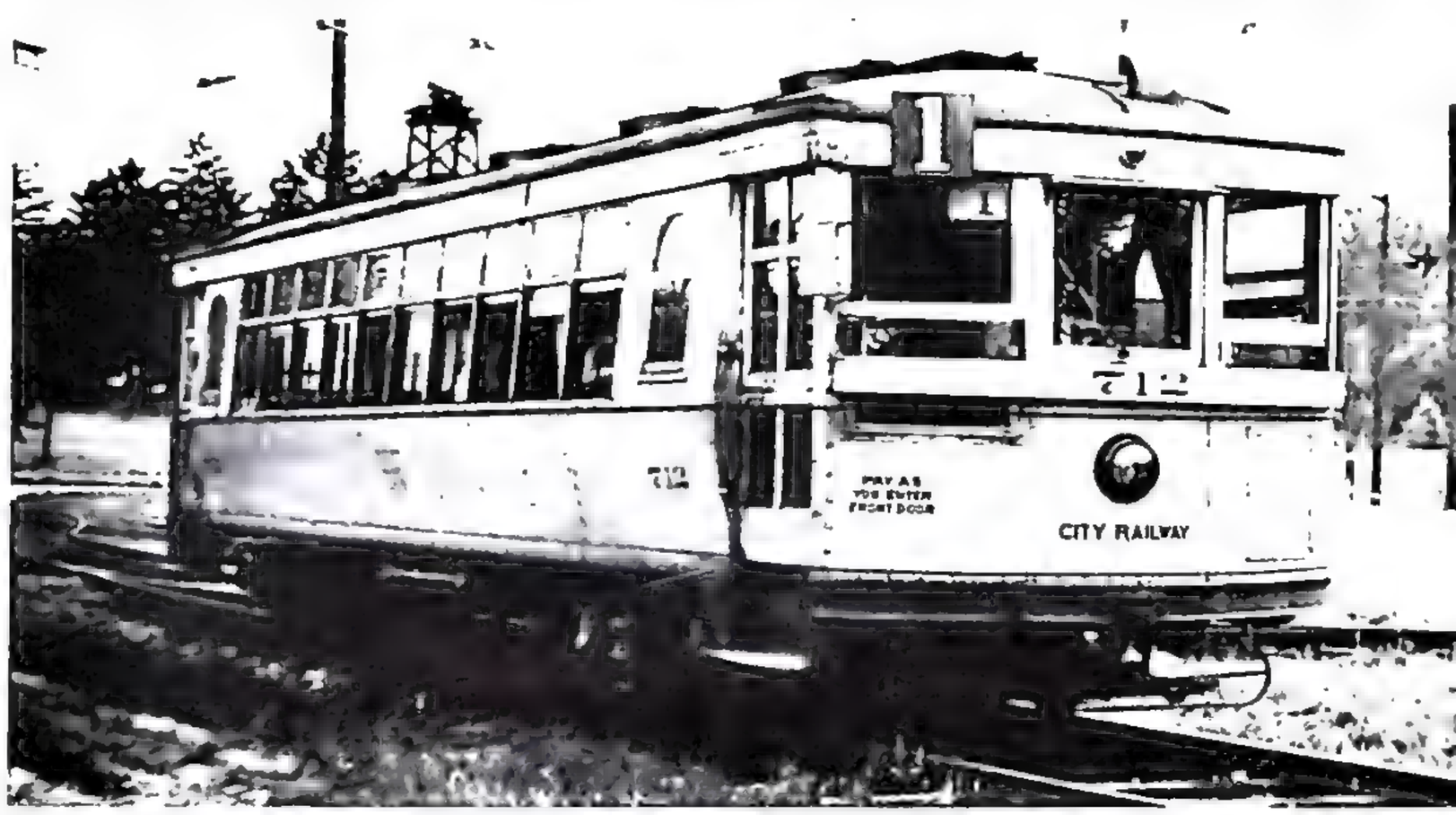
When service to Xenia was discontinued, a local route in Dayton was kept in operation with ten Cincinnati curved-sides in three different versions, along with at least one earlier Cincinnati product. Four of the "rubber stamps" were former D&X interurbans with spoked pilots and an unsual third door at the left rear of these single ended cars. Two others were acquired used after a line near Toledo went bankrupt. A third version was virtually identical to cars of the City Railway, with two purchased at the same time as City's initial order, and the remaining two acquired singly in partially completed condition for finishing in the company shops.

The D&X paint scheme also was very similar to that of the City Railway, although there was apparently no corporate tie-in. D&X cars could be distinguished at a distance by a large black sunburst painted around the headlight and a large "6" as a route number on the dasher (City Ry. cars carried their route numbers above a front window).

The company's barn and shop were at Zimmerman, nearly halfway to Xenia. This meant that a major part of the interurban trackage had to remain intact, so that equipment could be serviced and stored. It was apparent that with such an arrangement abandonment could not be far off.

The fourth company still in operation was the last remaining part of the Cincinnati & Lake Erie Railroad. Here ten superb suburban cars still in C&LE livery provided all-day service three miles south to Dorothy Lane in Southern Hills and in rush hours went an additional two miles to the Frigidaire plant and the company's own shops at Moraine. The rush hour service used the trackage on which a C&LE "Red Devil" interurban raced an airplane (and won) in a 1930 publicity stunt.

The suburban cars were 1927 products of Cincinnati Car Company and were considered by many to be the



In 1922 Cincinnati Car Company introduced a new design of light weight car featuring a unique reverse curve in the side which gave much greater strength for the same weight of metal. City Railway and Dayton & Xenia were among the first purchasers. The design proved popular and eventually nearly 400 were turned out, earning them the nickname of "rubber stamps." Here City Ry. 712 is seen at Soldiers' Home loop. Author.

All Cincinnati "rubber stamps" were not alike! This eight-windowed version was one of seven cars built for the Maumee Valley Railway near Toledo, Ohio in 1923. Economies inherent in these cars were not enough to save the line, and following bankruptcy five went to the Cincinnati Street Railway and two to the Dayton & Xenia. Here slightly battered 119 poses on slushy brick paving. Stephen D. Maguire.

best local cars to run in Dayton. Relaxing in one of their deep leather seats while riding over the extensive private right of way, one could get a "feel" for how it must have been to ride the "Red Devils" themselves.

At the shops at Moraine there was another find. The ten Kuhlman interurbans which Dr. Conway had purchased for use in modernized Dayton-Cincinnati service in 1927 were still on the premises, along with a freight motor which switched cars at the adjoining Frigidaire plant. It had been hoped that a buyer could be found for these excellent cars, but there was none, and they were eventually cut up for scrap.

In addition to the C&LE, there were two other stretches of former interurban trackage over which one could ride. In 1927 Peoples Railway reopened slightly over a mile of track which the Dayton, Covington & Piqua had operated until its abandonment in late 1926. DC&P had entered Dayton over Peoples' track, and this takeover amounted to an extension of their North Main Street line.

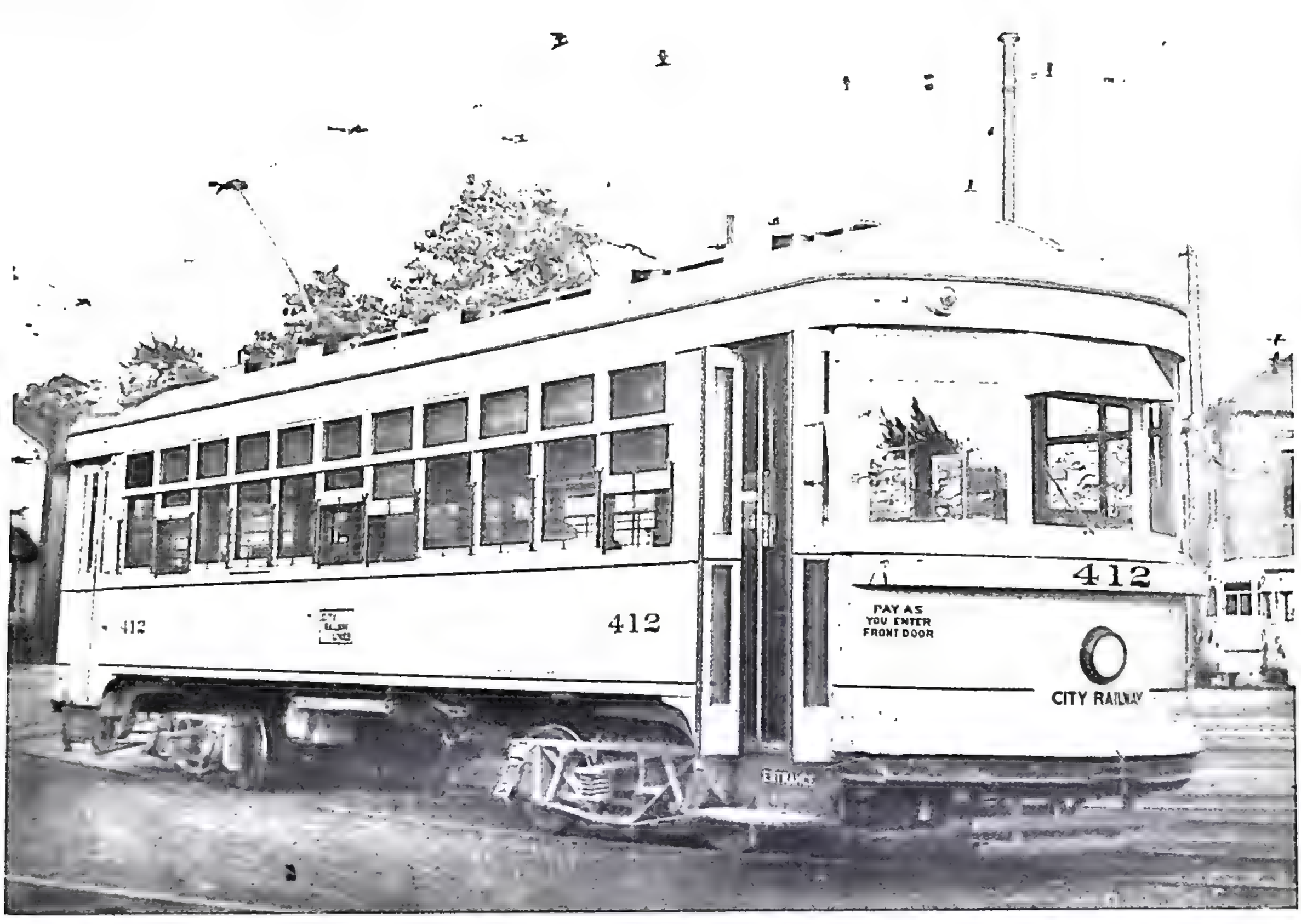
West of Dayton, City Railway in similar fashion took over one and a half miles of the Dayton & Western Traction when that line ceased operations to Richmond, Indiana in 1937. This was an extension of the important Third Street line, going beyond the Soldiers Home to Drexel.

Both of these segments were typical side-of-the-road operations, but they did give interurban flavor to what were otherwise largely center-of-the-street urban systems.

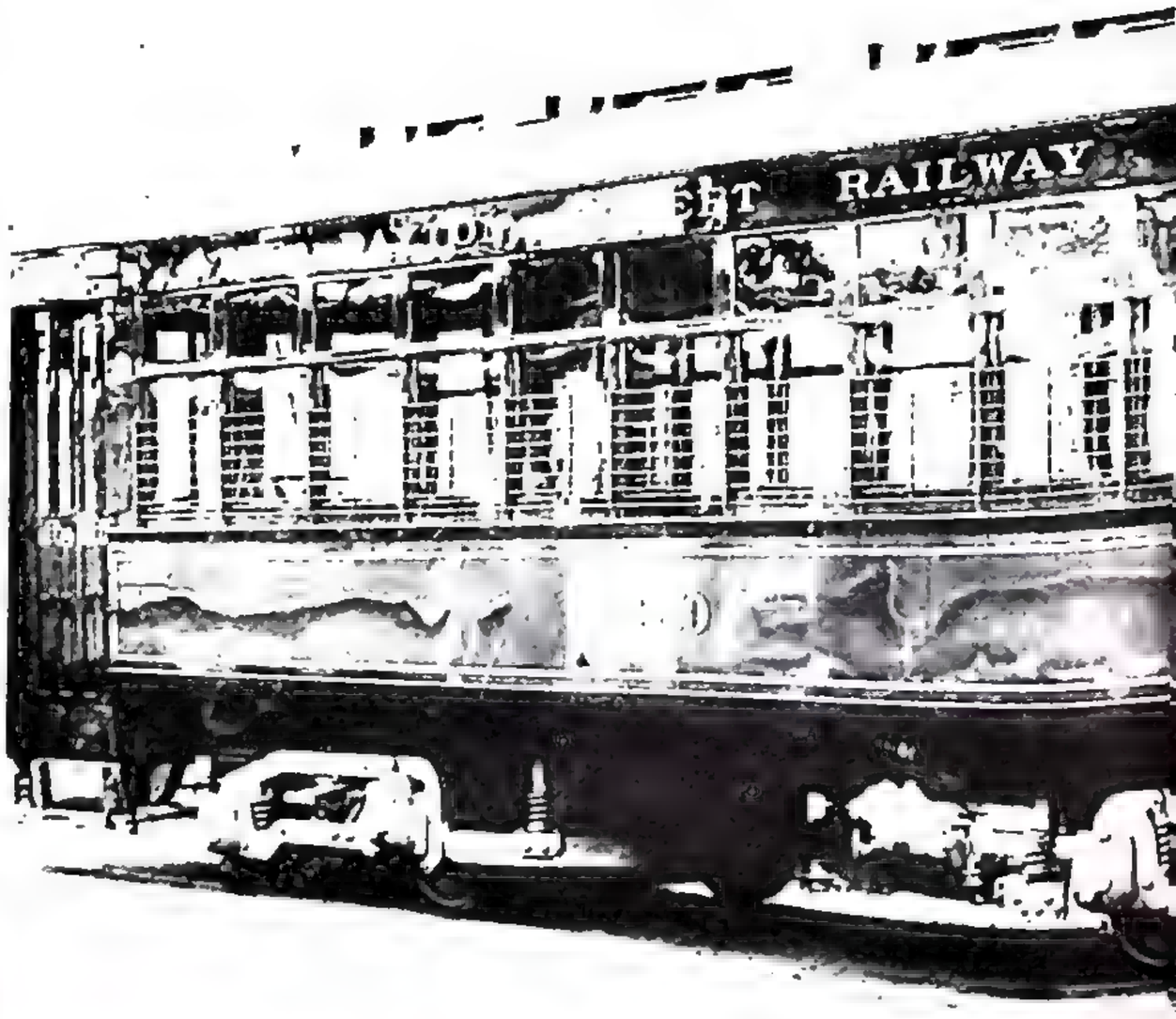
No description of Dayton's local street cars would be complete without mention of the other two local companies, although by 1939 they had long since turned their last steel wheel. Like their still operating com-

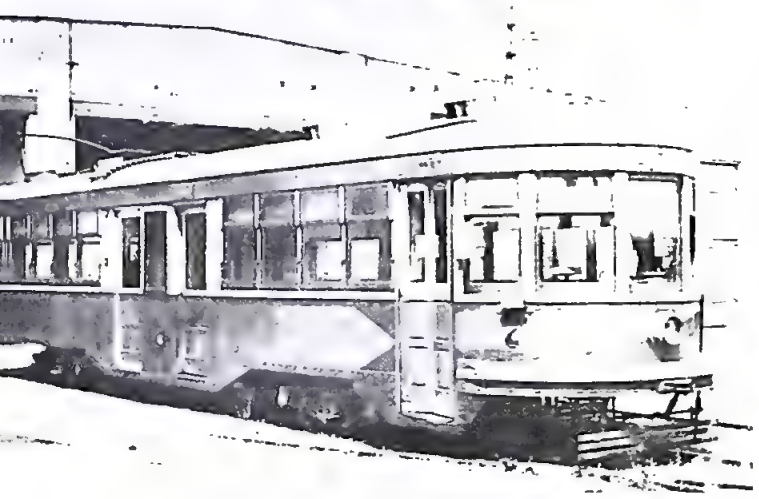
When Dr. Thomas Conway modernized the Cincinnati Hamilton & Dayton Ry. as a nucleus for the C&LE, he bought ten modern cars from Kuhlman for interurban service and ten from Cincinnati for local service in Dayton. He also built the modern shop facility at Moraine. Here 207, still in C&LE livery poses in front of the shops, with the now-out-of-service Kuhlmans as background. Author.

Renamed the Dayton & Suburban, a remnant of the Cincinnati & Lake Erie continued to provide suburban service with ten Cincinnati Car Co. products of 1927, perhaps the finest cars ever to run in local service in Dayton. Her 201 approaches Dorothy Lane wye on September 27, 1941, the last day of operation. Author from Stephen D. Maguire.

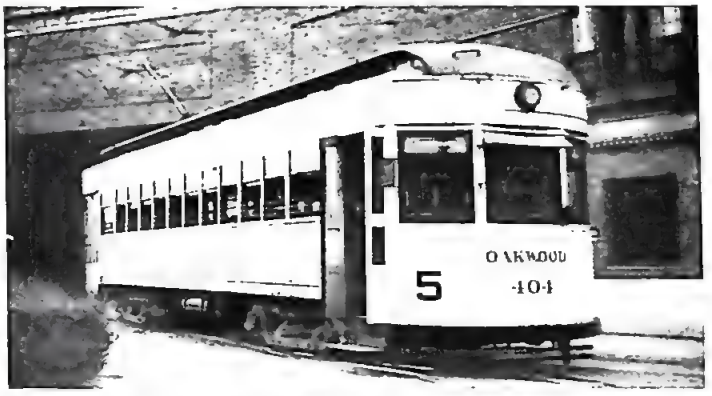


THREE OF A KIND! In 1913 City Railway received 20 arch roofed cars of what was for that time an advanced design. In 1914 Dayton Street Railway got five and Dayton & Xenia Railway got three near duplicates. All were equipped with the Standard Motor Truck Company's 0-45 maximum traction trucks, as shown in the Cincinnati Car Company builders photo of DSR 310. City Ry. and D&X apparently found the single motor trucks inadequate, and D&X 103 is shown with conventional Cincinnati arch bar trucks, while City Ry. 412 sports a home-built version.
DSR 310: Author's collection; D & X 103 and City Ry. 412: Stephen D. Maguire.





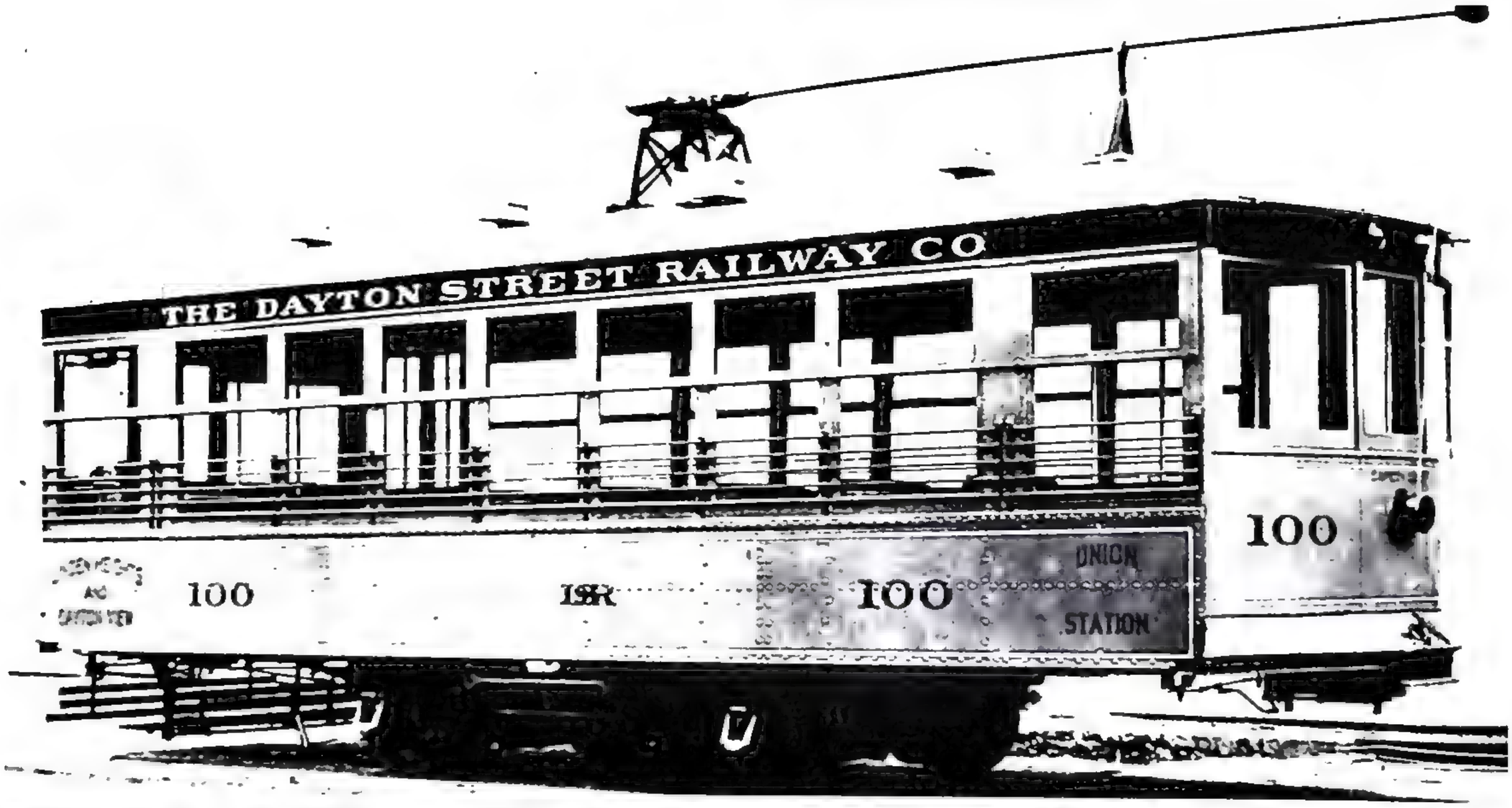
BEFORE AND AFTER. In 1917 Peoples Railway bought ten trailers from Cincinnati Car Company which closely resembled cars built for Cincinnati Traction Company a few years before. Acquired to handle crowds of World War I war plant workers, they were no longer needed after the end of the war and in the early Twenties were returned to Cincinnati to be rebuilt into powered cars. The view of 601 shows the original appearance. After rebuilding they were renumbered in the 250 series. Sister car 257 is seen near the end of its service. Trolley coaches have already usurped several bays of the barn.
601: Author's collection; 257: Thomas J. Scholey.



WHAT THE AUTHOR MISSED. Oakwood Street Railway had been without street cars for over three years when the author arrived in Dayton, but no account of Dayton local transit would be complete without mention of the 1895 Barney & Smith single truckers and the massive home-built double truck cars which this company operated on its single route up to the end of service. Interurban-proportioned 404 and four sister cars also were used occasionally in suburban service on the Dayton & Troy before that line ceased operation in 1932. Single truck 280 little resembles its original appearance, due to extensive rebuildings. Oakwood carefully replaced deteriorated parts in periodic shoppings, so that these antiques remained sound until the end of operations. 404: Stephen D. Maguire; 280: Dr. Reed C. Prugh.

In 1911 City Railway turned to Cincinnati Car Company for the first arch roof cars to run in Dayton. By 1940 they were no longer needed and scrapping began. Here 212 has been stripped of underbody equipment, trolley pole, and other usable gear. Note the sliding door—a precursor of a characteristic feature of the curved side cars received in the early Twenties. Author from Stephen D. Maguire.

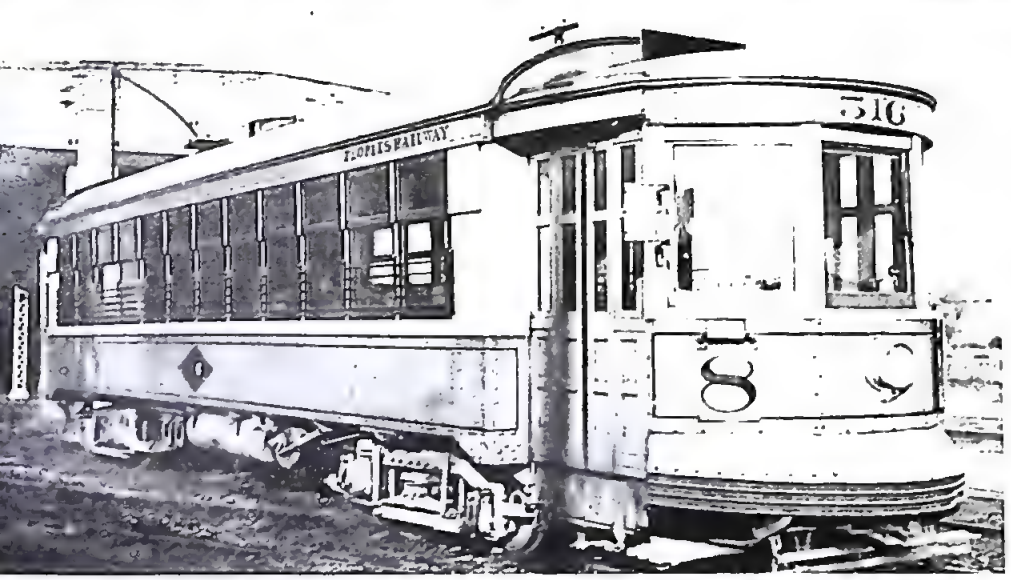
With rare exceptions, the practice of painting destinations directly on car bodies disappeared in the U.S. shortly after the turn of the century. Dayton was one of these exceptions, as shown by this Cincinnati Car Co. builders photo taken in 1922 of Birney 100 built for the single-route Dayton Street Railway. Ten years later, these cars were destroyed in a car barn fire, leading to the introduction of trolley coaches in Dayton. Author's collection.



patriots, they too had added unusual variety to the Dayton scene.

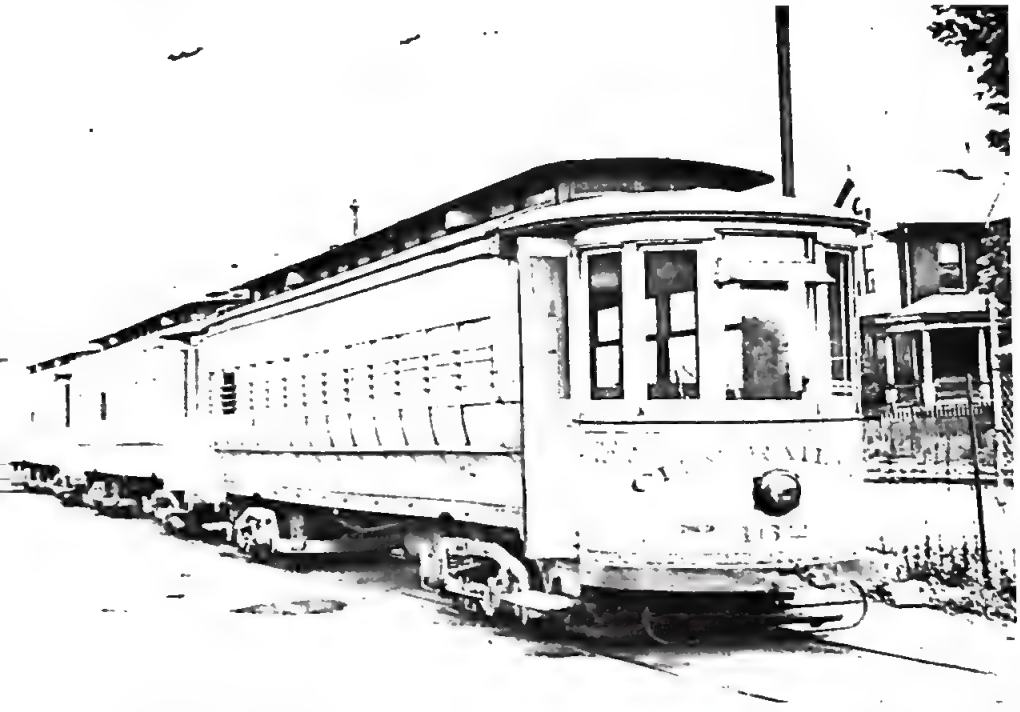
The Dayton Street Railway was the last local company to be formed in the city; it was also the first to be abandoned. Initially operating single truck products of Barney & Smith, they bought five double truck cars from Cincinnati Car Company in 1914 and then in 1922 acquired 15 Birneys from the same source. These were the only Birneys to operate in Dayton, and they did not operate there for long. The company lost virtually its entire fleet in a car barn fire in 1932. Management studied existing trolley coach installations and decided that this new mode was the answer. In April, 1933 the first TC's came to Ohio and to Dayton—they're still there!

This conversion was watched with interest by the Oakwood Street Railway, which was still operating Barney & Smith single truck cars of a design dating to 1895. Like the Dayton Street Railway, Oakwood operated on a single route. Rather than lay out good money for new cars, this company had made it a practice to put every car through its well-equipped shop periodically, replacing anything which showed signs of wear. The appearance of the cars changed greatly over the years, and one suspects that there was little of the original cars left except the truck and the number. Oakwood also built six massive double truck cars of almost interurban proportions in their shops and did a number of rebuilds of varying complexity for City Railway, the Dayton & Western, and the Dayton & Troy. The double truck cars also operated on occasion in suburban service on the Dayton & Troy, which was owned



Peoples Railway was not a Stone & Webster-managed property, but it had 20 of these "turtleback" cars built to a Stone & Webster design. 516 was a St. Louis product, but ten of these cars were built by Brill. Dr. Reed C. Prugh.

In 1903-1904 the local firm of Barney & Smith provided 15 of these wasp-waisted cars to City Railway. By 1939 they were no longer needed, and here 162 and two of its fellows await scrapping. Author.



by the same family.

In January, 1936 Oakwood also succumbed to the trolley bus.

Operating and abandoned lines followed a practice—disconcerting to one from the East—of numbering cars by twos, fives, or tens. Only the cars of Peoples Railway and the C&LE were numbered serially. City Railway numbered by tens. Their long-gone single truck closed and open cars had been assigned numbers ending in "6" and "7" respectively, and the double truck cars ended in "2." Dayton & Xenia, perhaps to ensure that they did not inadvertantly confuse city and interurban cars, numbered the former from 101 to 127 using only odd numbers (and with some omissions) and the latter beginning with 150 and using only even numbers. To further complicate the D&X system, they skipped 123 and numbered single cars purchased in 1925 and 1927 respectively 125 and 127.

Oakwood, prior to conversion, had numbered by tens ending in "0" for single trucks, but serially for the double trucks. Dayton Street Railway numbered by fives.

Despite the lack of corporate tie-ins, there were remarkable similarities in certain types of cars on the various lines. The D&X sharing of the initial City Railway order for "rubber stamps" has already been mentioned. This was a repeat of a process used twice before.

In 1913 City Railway purchased from the Cincinnati Car Company 20 modern (for that day) arch roof cars. These were duplicated in orders for three cars for the D&X and five for the Dayton Street Railway in 1914. Then in 1916 City Railway ordered ten cars with bodies one window longer, but quite similar to the earlier cars in other respects. D&X then received in 1917 two cars built to the 1916 specifications. Of course, by 1939 the DSR cars were gone, but most of the others were still around, although some had gone through changes of trucks.

But by 1939 it was apparent that the end was probably not far off for street cars in Dayton. Peoples Railway converted its remaining North Main-Wayne Ave route in August, 1940, and the Dayton & Xenia ran its last cars in October. Then in July, 1941 City Railway discontinued trolleys on the Kammer Avenue route, and—tragedy of tragedies for the local fans!—the remaining remnant of the Cincinnati & Lake Erie was abandoned in September.

Then World War II intervened. The C&LE 200s went to Richmond, Virginia, where they ran out the war. In Dayton the two remaining City Railway lines on Fifth and Third Streets lasted until August and September of 1947, when they, too, were converted to trolley coach.

The tiny Soldiers Home-Drexel, former Dayton & Western segment, operated with a single car until November, when trolley coach wires were finally strung, and the last car ran in what had formerly been one of the major electric railroad centers of the Midwest.

There is a happy ending of sorts. With the exception of the C&LE, trolley coaches follow generally the old street car routes, with modifications that would have probably been made fifty or sixty years ago if Dayton had followed the national pattern of consolidation of that era. But the point is that electric transportation, albeit on rubber tires, is still available. Today Dayton is the only U.S. city which depends on TCs for virtually all of its urban public transit.

And now the possibility is being explored of bringing back the trolley, in the form of Light Rail Vehicles operating on former steam road right of way. But that is a long time from the time a young traction fan visited Dayton for the first time—and another story.

ANGEL'S FLIGHT... and other funiculars

by Ed Stauss

About railroads that go up and down . . . and one that got put away in a box.

Angel's Flight as it appeared about 1905, shortly after the line was reconstructed to a single grade. The tower in the center, Angel's View, contained a camera obscura providing magnificent views of downtown Los Angeles. Title Insurance and Trust Co. Collection.

The corner of Third and Hill Streets at its "Finest Hour," 1910. Compare this to the same view taken in 1965 with the leveling of the buildings well underway. Today, in 1975, all buildings visible have been razed for parking lots and redevelopment. Gone also is the observation tower, the tracks and Angel's Flight itself. Title Insurance and Trust Co. Collection.

The world's tallest and most difficult mountains are climbed "because they're there," but hills are often climbed just because they get in the way of travel. Modern earth moving machinery can bulldoze roads which are easily climbed by automobiles, but there was a time before bulldozers when counter-balanced cars on steel rails provided the easiest way to get up a hill.

Starting about 1870, funicular railways became quite popular wherever there were hills with a constant supply of potential passengers. There was a certain fascination with the idea of getting something for almost nothing. Because the two cars counter-balanced each other, the only power that had to be supplied was that needed to overcome friction.

Most of the short railways were, or still are, items of local pride. One completed in 1880 on Mt. Vesuvius became the inspiration for the classic song, "Funiculi, Funicula."

Los Angeles has a complete funic-

With only four more years to operate before being placed in storage, the railroad looked rather bleak running up a denuded hill. All that remains today is a tunnel just to the right of the incline. Cal-Trans photo.

ular railroad, but, like a Lionel train, it's stored away in the "attic." After operating on Bunker Hill for nearly seventy years, it had to be moved because of a sweeping urban renewal project. Rather than scrap the historical railway, it's being saved to be placed back in operation when the renewal is complete.

In early 1901, Los Angeles expanded by boring the Third Street tunnel through Bunker Hill. Surrounded by the city, the hilltop became so valuable that Colonel J. W. Eddy decided to finance a funicular railroad to the top.

He gave it the fanciful name of Angel's Flight and the angels really had to watch over it to keep it running. In fact the angels are still watching and are a little worried.

The original railway, completed on December 31, 1901, followed the natural contour of the hill. Four years later it was rebuilt on timber trestles to a uniform 33 percent grade. The angels relaxed a bit as the new trestle eliminated the grade crossing with Clay Street.

They should not have relaxed because, on September 2, 1913, the car named Sinai broke lose when it was

ANGEL'S FLIGHT

Compliments of J.W. EDDY

HAVE YOU VISITED *the*

"ANGEL'S FLIGHT?"

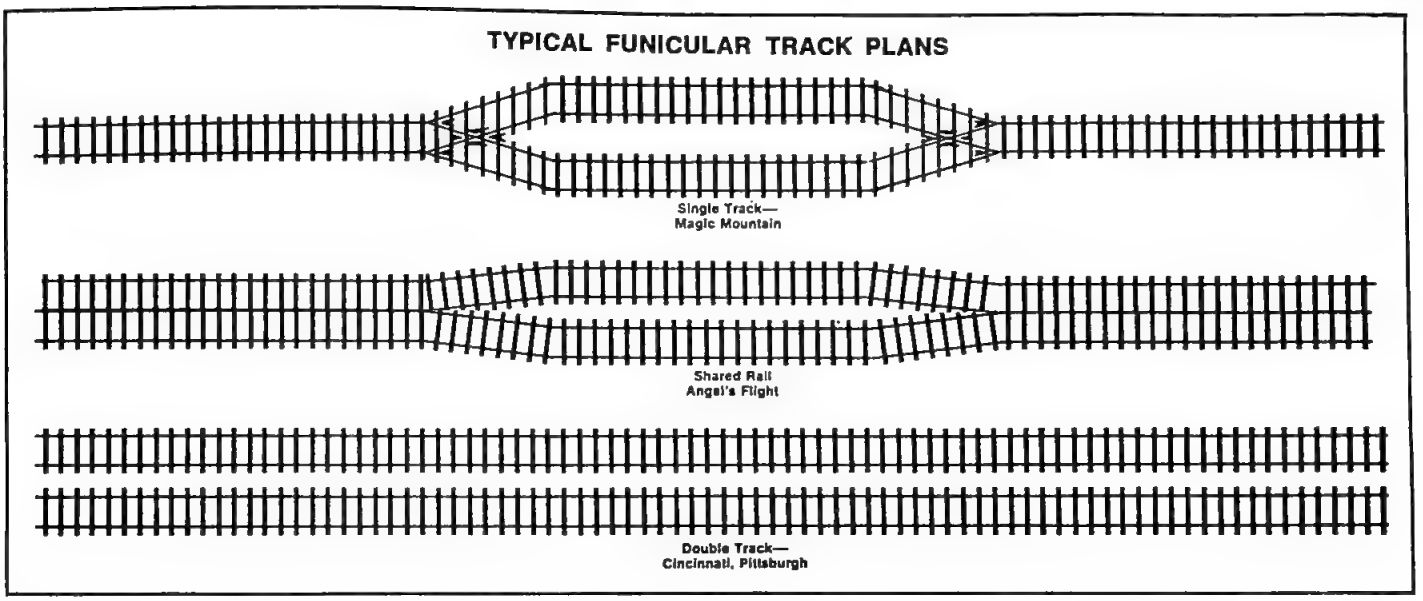
If not, why not?

IT IS THE MOST UNIQUE, INTERESTING AND USEFUL INCLINED RAILWAY IN THE WORLD.

IT is in the heart of the city Hill and Third Streets, Los Angeles, Cal. The ride is inspiring and perfectly safe. The view from the Tower - "Angel's View" is grand, overlooking city and mountains. The camera obscura puts a beautiful living picture of Third Street and vicinity on canvas before you.

Fare 5 cents, three for 10 cents, ten for 25 cents, 100 for $1.00. Angel's View with Camera Obscura, 5 cents; three for 10 cents. Rest Pavilion, "Angel's Rest," overlooking city, Eddy Park and Fountain FREE. Easy Chairs. Come and bring your friends and enjoy yourselves.

PHONES: Home 2013, Main 1314



at the top and carried its passengers down the hill, its speed only slightly slowed by some of the broken control mechanism it dragged with it. As it neared the bottom, the car moved on to the three-rail section where both cars shared the common center rail. This allowed the Sinai to use the side of its Siamese-twin car, Olivet, to break its crash into the end barrier. Thanks to the angels, only one passenger was seriously injured.

The 325-foot railway was soon restored to service, but in 1935 new trouble developed. This time the City Council decided to terminate the railway franchise so that Third Street could be widened. By now the citizens had such affection for Angel's Flight that 1200 of them, doubtless assisted by the angels, organized to fight City Hall and had the decision reversed.

In the mid-1960s, the old Victorian homes on the top of Bunker Hill were razed for the urban renewal project. Now commuters were parking their cars on the deserted hilltop and riding down to Third and Hill Streets to jobs in the downtown area. But the commuter runs didn't last and the angels gasped in May, 1969 when Angel's Flight was disassembled and hauled away on trucks.

Now the property of the Community Redevelopment Agency, it is carefully stored in two Los Angeles warehouses. The master plan is to rebuild Angel's Flight to serve modern high-rise buildings which are now in planning. Will

◁ *This promotional brochure was given to passengers and tourists during the early days of Angel's Flight. Title Insurance and Trust Co. Collection.*

The grade up to Bunker Hill was a uniform 33 percent. James Howell photo.

At the upper portal of the railway was the control station. The cars were operated from a streetcar controller. James Howell photo.

The simple wooden cars had no doors, but rather just open entrances at each end of the car. The poor condition of the cars can be seen quite readily. James Howell photo.

These signs greeted passengers at the top entrance. James Howell photo. Copyright 1974 Automobile Club of Southern California. Reprinted from Westways.

the CRA keep its promise? The angels are watching.

For the waiting angels of Los Angeles, here's a status report. On a recent inspection trip, I found the cars to be showing their age. The roofs were particularly bad. As I gave the moulding a loving pat, it seemed about as solid as a biscuit of shredded wheat. It could have easily been pulled apart. Many wood joints are open wide, showing rusty nails.

Current plans are to use the original cars as patterns from which new cars will be built. Reluctantly, I have to agree the old cars won't do.

Everyone involved agrees that Angel's Flight will be rebuilt exactly like it was and in about the same location, give or take about 100 feet. But when will it happen? Fortunately the citizens of Los Angeles haven't forgotten. Some of them call Fred Johnson, Public Relations Director of the CRA, every week to ask him when.

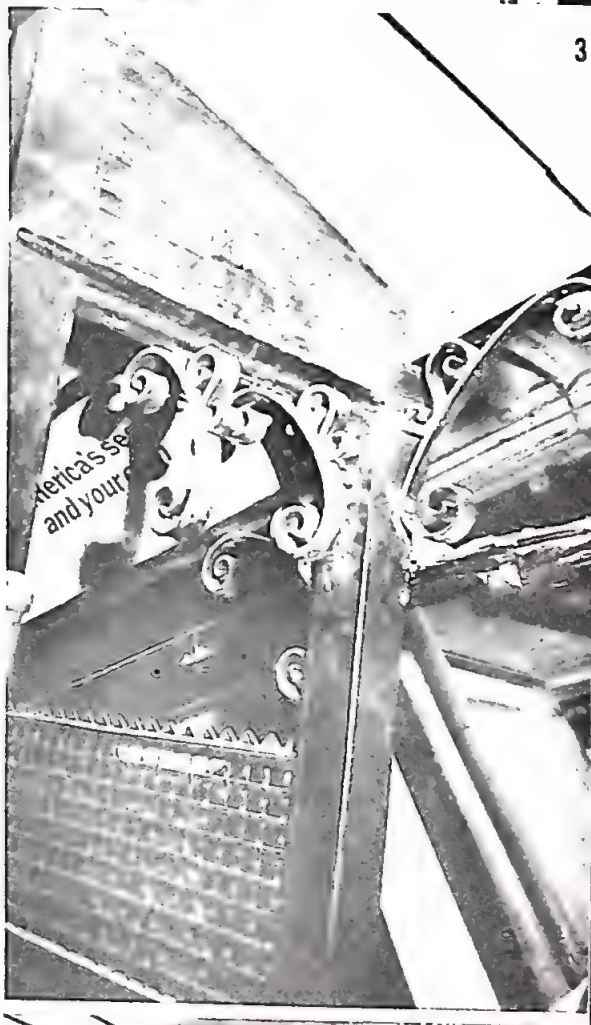
Johnson won't make an estimate. First, he says, a suitable developer will have to come along who wants to build on the hill at the upper terminal of the railway. When the plot plan has been approved, it will then be possible to do the final grading of the hill and design the new installation of Angel's Flight.

It will be a matter of years, maybe two, maybe ten, before new construction reaches the Angel's Flight terminal. But how much longer can Angel's Flight molder in a warehouse before the citizens lose interest in this piece of heritage? The wait continues . . .

In Cincinnati, there were once five incline railways. The incline cars had level platforms upon which the regular cars of the Cincinnati Street Railway were parked for a ride up or down the hill. Conventional streetcars, PCCs, and buses used these inclines.

I recall my fascination riding the Mt. Adams Incline several times as a boy. Our streetcar would roll onto the incline platform, gates would shut, and a safety post would rise. Then, gently and silently, our platform would begin to move up the hill. Soon I would see the other platform descending at the same rate on the opposite track. I watched it until we passed in the middle, then turned to look back to see Cincinnati and the Ohio River falling below us.

The regular streetcar tracks, double-tracked throughout Cincinnati, would merge into a single track on the approaches to the incline stations then split again to enter the two car-ways through the stations. The single-track section would allow the motorman to select whichever side had the ready incline car. Streetcars were operated onto the platforms under their own power with extensions of the electric



THEY PUT THE TRAIN AWAY

On a recent visit to the warehouse where the Angel's Flight cars are stored, it was evident that the cars will never see operation again. Their condition is such that they can only be used for display, something that will hopefully happen. They now sit forelornly amongst piles of water heaters, building supplies and other materials for the Community Redevelopment Agency. Denis Dunning photos.

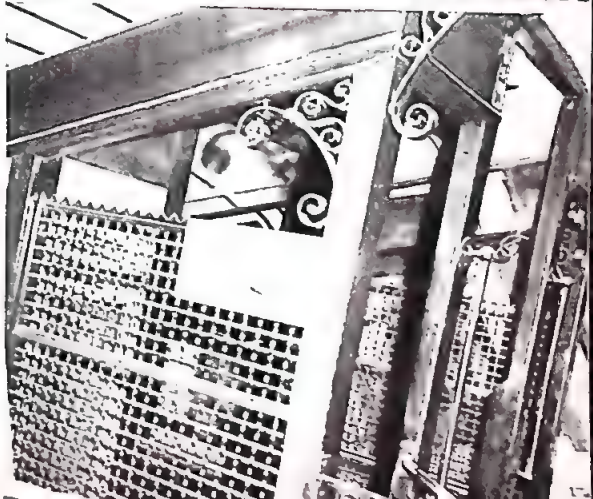
1 *The two cars rest awkwardly in the warehouse. Restored to their 33 percent grade, they could regain their grace.*

2 *Inside ,the cars are all stairs.*

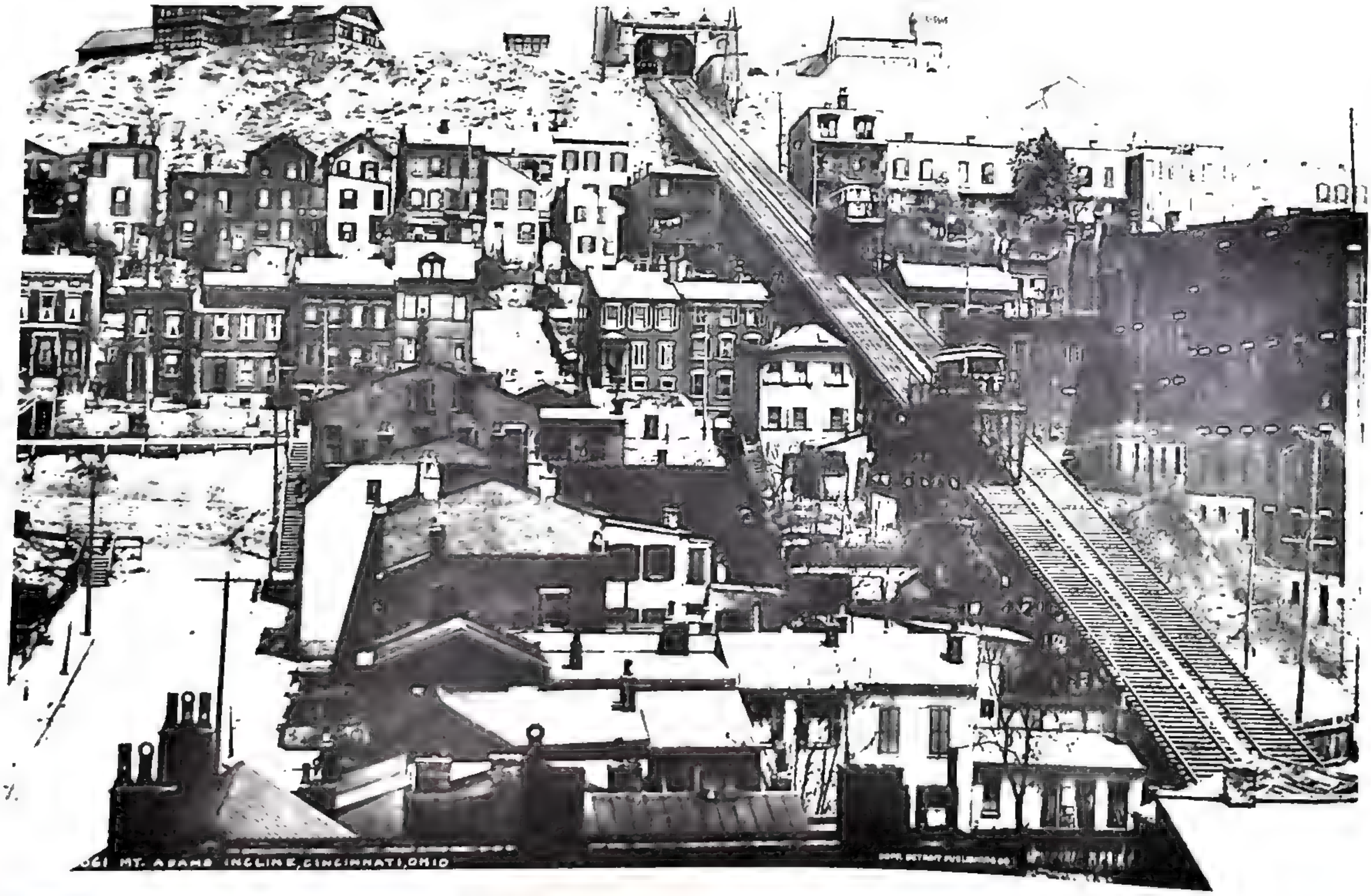
3 *Under the paint the wood is turning to dust, with only the metal scrollwork being reusable.*

4 *The windows tilt to represent the grade the cars once plied.*

5 *No springs . . . the axles turned in bronze bushings keeping the tiny 12-inch wheels rolling.*



Cincinnati's Mt. Adams Incline carried the whole streetcar up and down a 30 percent grade. The 945 feet of seven-foot gauge carried, over the years on its platforms, four-wheel open cars, conventional double truck cars, streamlined PCCs, buses, private trucks, autos and pedestrians. Both photos, Cincinnati Historical Society Collection.



overhead wire supported by five steel arches.

The last Cincinnati incline, the Mt. Adams, ceased operation in 1948 after 74 years of service.

One of the first inclines in the U.S., the Monongahela, opened in Pittsburgh on May 28, 1870 and is still in operation 105 years later. Operated by the Port Authority of Allegheny County as part of the bus and streetcar network, it travels parallel tracks, 640 feet in length, at six miles per hour.

Nearly one-half million commuters and tourists ride the incline each year. In 1967, I was one of them. The ride up the 71 percent grade is thrilling. I entered the incline car at the lower terminal, near the bank of the Monongahela River. As we ascended, I had a spectacular view of downtown Pittsburgh across the river.

At one time there were 17 inclines operating in Pittsburgh, but only the Monongahela and the Duquesne are still in use.

In 1874, an incline was opened to climb the Hudson River Palisades in New Jersey. It connected with ferries which crossed the river to New York.

A mile long incline rose from the Connecticut River Valley to Mt. Tom. Duluth, Minnesota had an incline from 1891 to 1939. And there were others in Dubuque, Iowa, Chattanooga, and on California's Mt. Lowe.

New inclines are still being built. One is at Magic Mountain amusement park in Valencia, California. Using European-built cars, it transports visitors to the top of the "mountain." Passenger loading is simplified because the railway is single-tracked at both portals. The track switches at both ends of the passing siding aren't exactly switches because there are no moving parts. Each of the two cars is uniquely flanged to select its proper turnout.

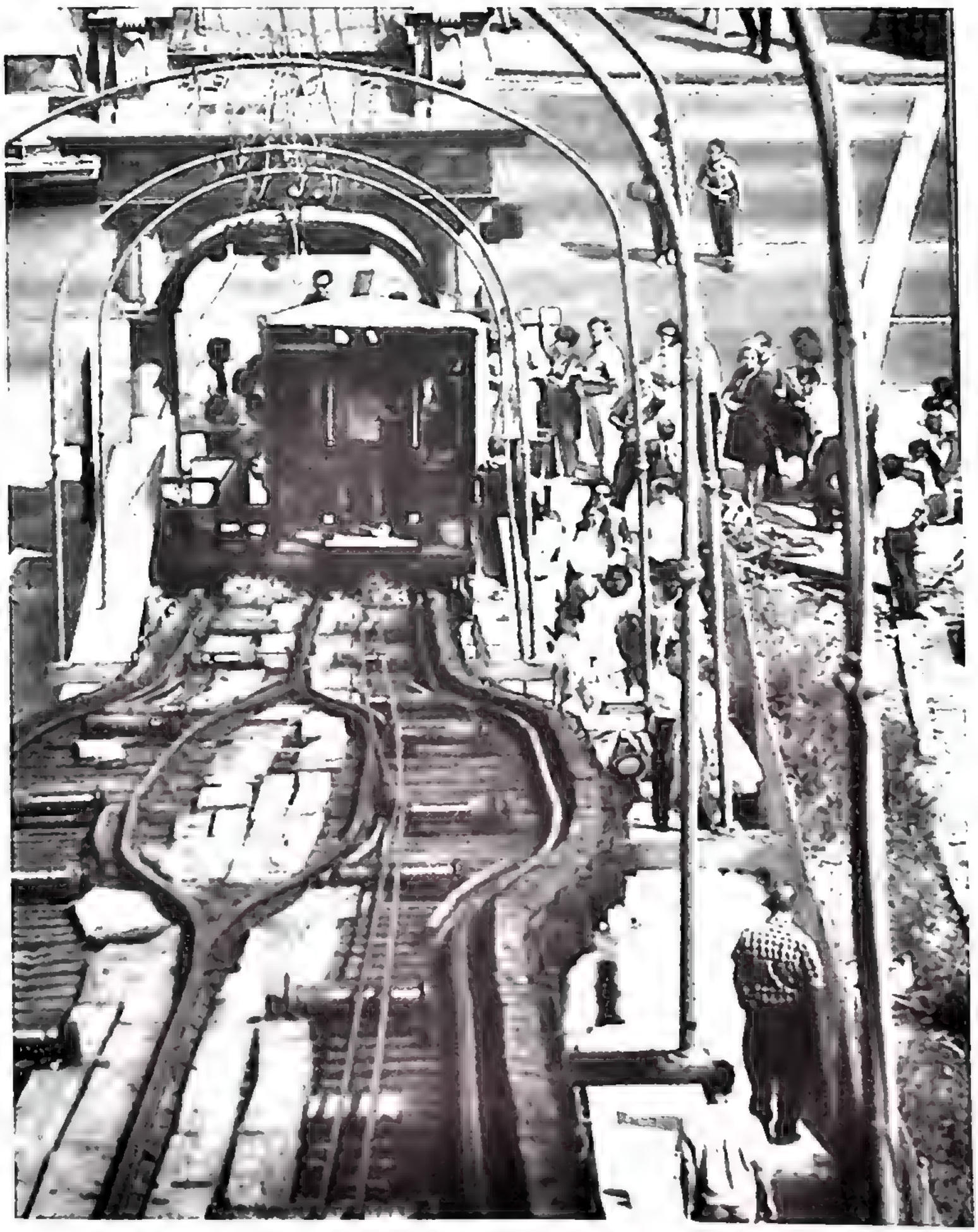
Another modern funicular is operating in Canada at Niagara Falls. A very popular ride, I found it expedient to walk up the hill a few years ago rather than wait with the crowd.

Most of the inclines produced during the 1870-1900 wave of enthusiasm have now been abandoned. In most cities there were attempts by historically-minded people to save them, but usually the funds weren't available.

Pittsburgh is fortunate to have two still operating. Los Angeles hasn't exactly lost its little Angel's Flight, but its not running either. Still in storage, the City Council and the Community Redevelopment Agency have promised to restore it just as it was . . . someday.

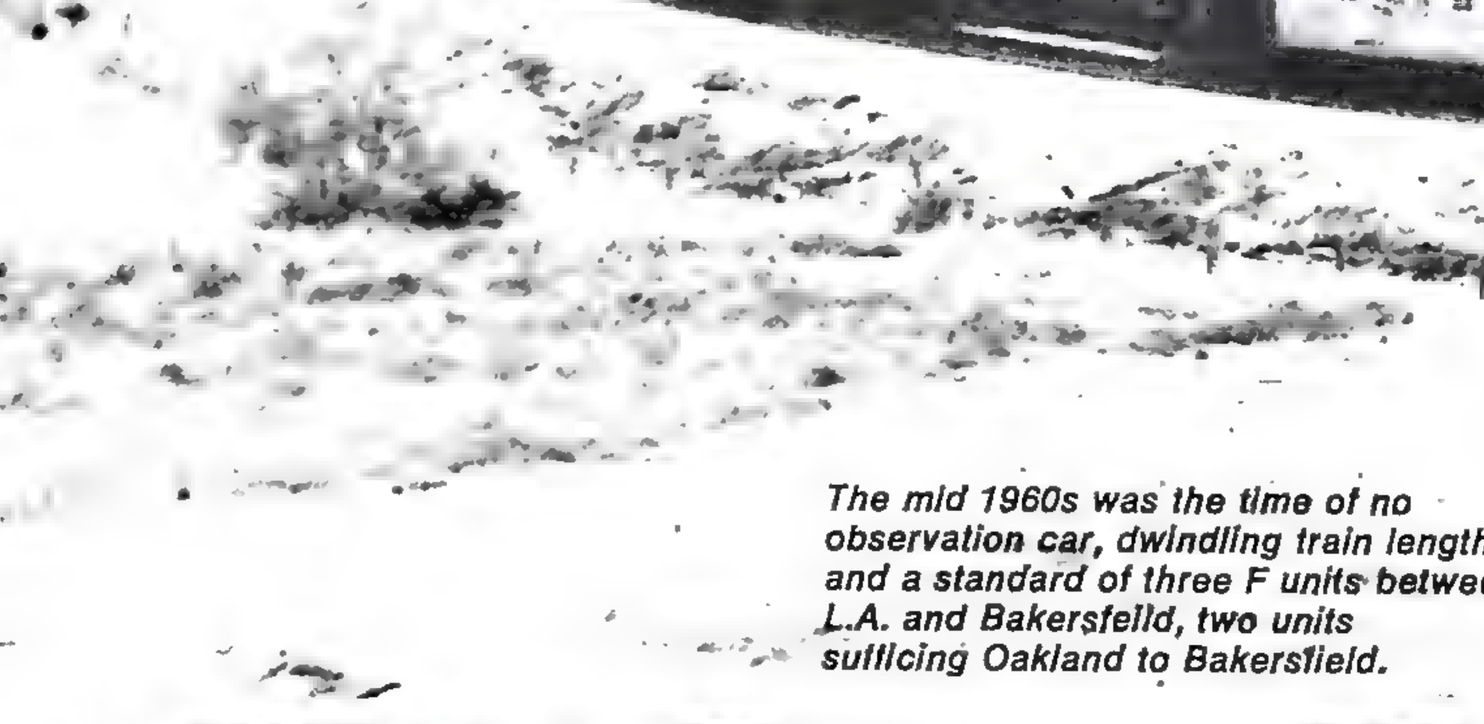
Passing at mid-flight, the cars of the Angels are separated by just four inches. James Howell photo.

Angel's Flight track plan is clearly evident with its shared center rail. The photo was taken on the last day of operation in May, 1969, the reason for the large crowds. James Howell photo. Copyright 1974 Automobile Club of Southern California. Reprinted from Westways.



The San Joaquin carried an observation car for years but towards the end of its career it was nowhere to be seen. Here in the 1950s the northbound train is passing through the Tehachapi Loop with a freight train waiting in a siding.

The mid 1960s was the time of no observation car, dwindling train length and a standard of three F units between L.A. and Bakersfield, two units sufficing Oakland to Bakersfield.



DAYLIGHT IN THE SHADOW

Southern Pacific's California inland train had a personality all its own.

By Don Sims

Menlon the name "Daylight" to a devotee of passenger trains and you will undoubtedly stimulate certain images. Memories of high wheeled red and orange steamers whipping along California's coastal shores or later era diesels grinding up the sharp mountain curves above San Luis Obispo. The coastal "Daylights" were among America's most famous trains as they plied a daily routine between San Francisco and Los Angeles which was fated to succumb to other means of travel.

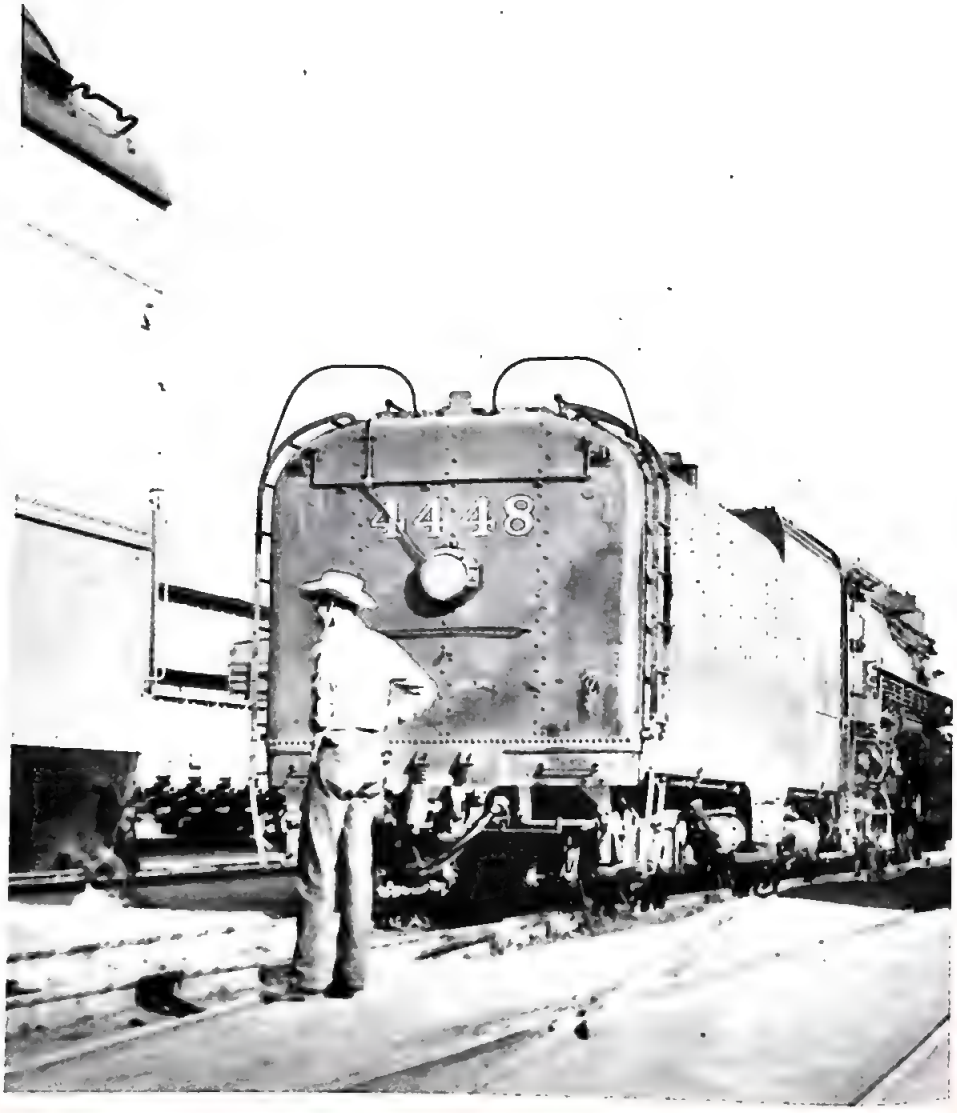
While the coastal runs received the accolades, Southern Pacific fielded another Daylight train, the lesser known *San Joaquin Daylight* which followed a somewhat circuitous pathway between Los Angeles and Oakland with a connection to Sacramento. Linking California's largest city with communities up and down the agriculturally dominant central valley, trains 51 and 52—the timetable label — never really traded on their speed, more on connections. True, they were limited only by roadbed condition and tractive effort in the valley which is unbelievably flat but the out of the way mountain barrier via the Tehachapi Mountains tipped time factors to the coast line.

Northbound above Fresno, the San Joaquin rolls effortlessly through the northern reaches of California's great central valley—the now black 4449 operating with the side skirts removed.

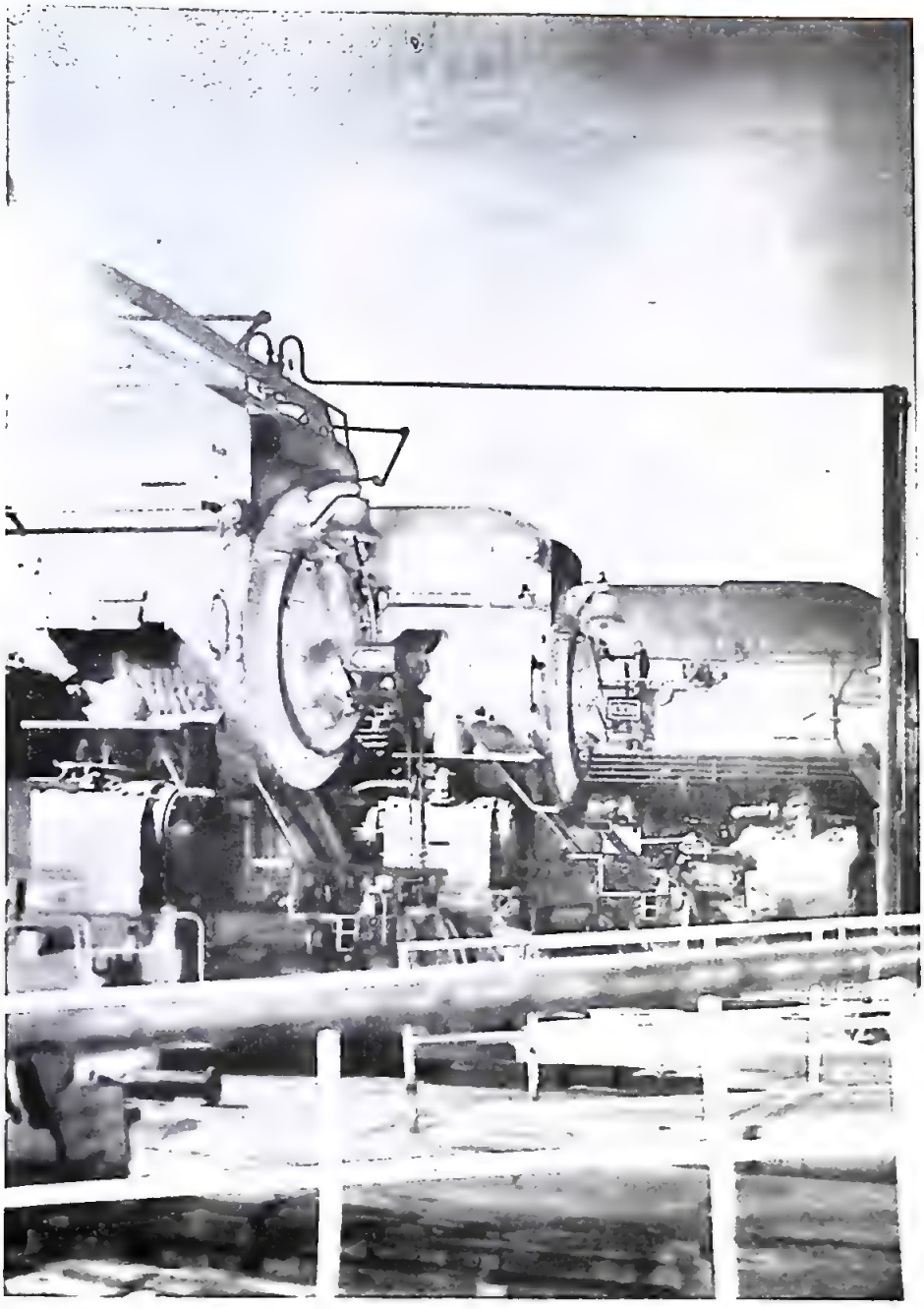
Travelers between L.A. and San Francisco rode train 98 and 99 the *Coast Daylight,* people needing transport to intermediate valley points rode the *San Joaquin,* even though it ended up in the bay area at Oakland or reached Los Angeles Union Passenger Terminal.

Four hundred and seventy miles of Espee plus 9.75 hours of your time would be consumed aboard a *Coast Daylight* trip while L.A. to Oakland Pier called for eight miles of additional roadbed and a flat 11½ hours.

At one point in time there was actually a trio of *Daylights.* Immediately following World War Two Southern Pacific added a noon *Daylight* schedule along the coast but it failed to last long while a companion nighttime run, the *Starlight,* provided alternative coach travel, running between the large cities just ahead of the all-pullman *Lark.* By way of comparison the inland route had several trains also but only one streamliner, the *San Joaquin Daylight.* The others were built around standard weight coaches and Pullmans.



At one time diesels powered the San Joaquin over the hills to Bakersfield with 4400's (the 4-8-4s) being picked up there for the run to Oakland.



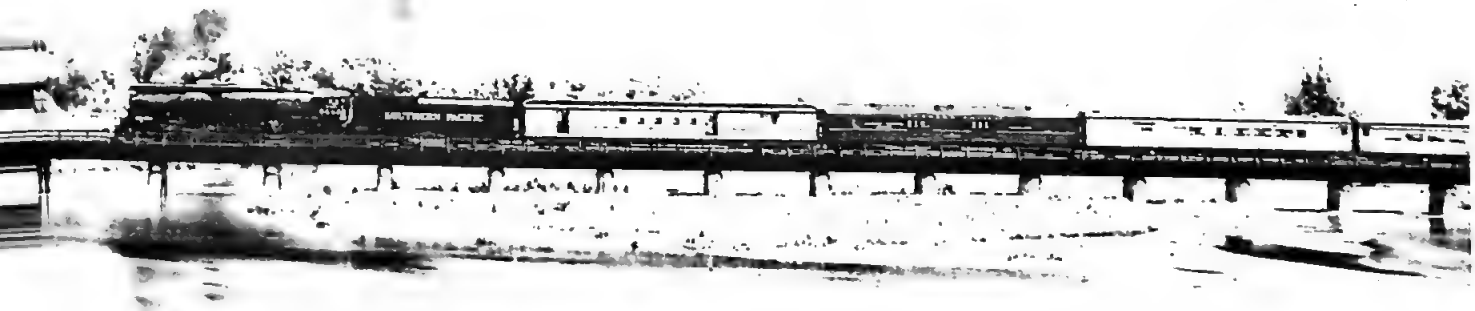
A couple of 4300 Mountain types and a 4400 Daylight northern grab some rest in the Bakersfield terminal area between passenger train assignments.

The inland Daylight schedule was actually born in 1926 when Espee inaugurated a daytime run known as the *San Joaquin Flyer*. Two years later the "Flyer" handle was dropped and the "San Joaquin" carried on through the depression era with serviceable but plain rolling stock. In 1941 streamlined cars were added and the daily train amidst the beating of public relations drums became the "San Joaquin Daylight," a name that lasted right down till 1971 and the characteristic black bunting of a last run.

Greatest hurdle in scheduling 51 and 52 was the Tehachapi Mountains barrier, an upthrust block that had long bedeviled railroad operations in the area and still does. It took 4 hours and 46 minutes to cover 169 miles L.A. to Bakersfield and 6 hours, 44 minutes to go the other 307 miles to Oakland Pier.

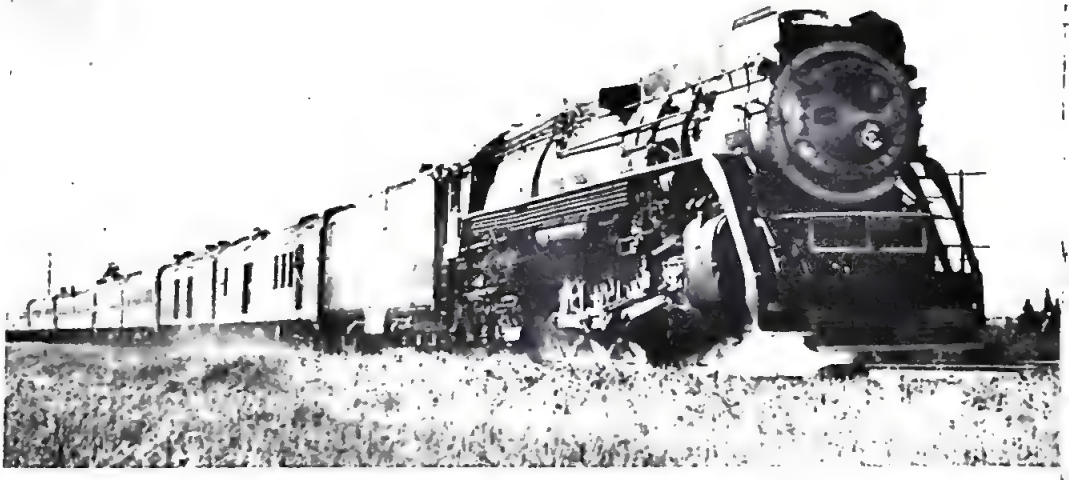
Helpers were standard fare for many years over the mountain grades. Originally the *San Joaquins* were hitched to 4300 class 4-8-2 type engines and it took two of them to get over the hills. Then as passengers dwindled and the number of cars fell off, a single 4-8-4 was sufficient on many days, though at other times a 4400 Class Daylight engine and 4300 Class Mountain type were brought together. By 1956 diesels were permanent fixtures on

Unlike the coastal trains which rarely carried mail, the San Joaquin Daylights had as standard fare an RPO car.



All Alco up the hill . . . #52 comes through the U curve at Caliente on the way up the mountain to Tehachapi.

On this particular day #51 was running pretty light so a single 4-8-4 provided enough tractive effort make the run north without aid over the L.A.-Bakersfield segment.



A southbound trip passes by a 2-10-2 switching its train in a siding near Modesto.

trains 51 and 52, but their internal combustion power paled with comparison to steam.

Imagine a time when two 4-8-2s stopped briefly in suburban Glendale to fill out, then briskly tossing huge smoke plumes in the air when racing northwards towards the daily challenge of Tehachapi. Their staccato exhausts trembled under the burden as they climbed through stands of cactus beyond the desert town of Mojave or passed freights which respectfully holed up in lofty mountain sidings way up there above the great central valley. Circling through the "loop" the inland *Daylights* performed a daily ritual that few speculated about, taking the "forever" approach to a ride that would eventually cease to be.

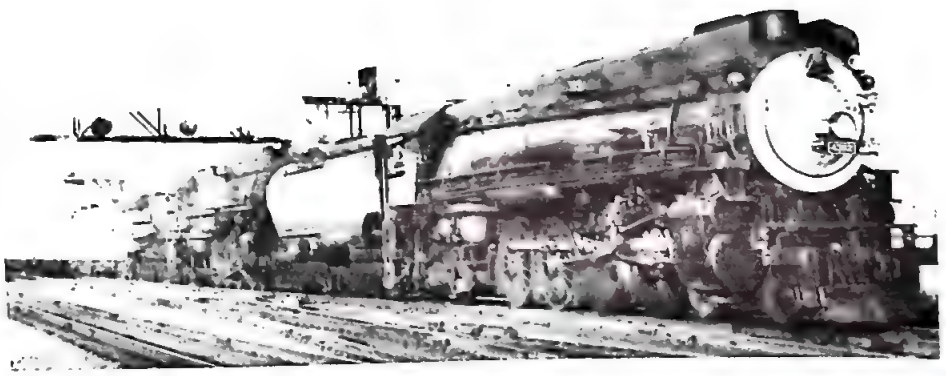
A few minutes of rest at Bakersfield while the helper cut out, then off northwards on some of the straightest, flatest roadbed in North America. The brakeshoes that had glowed cherry red on the mountain were hardly touched down below. Now it was all billiard table for almost three hundred mileposts. Here and there a brief stop was carded, the hogger looking past the huge tender for a highball, then easing through the outskirts of some valley town as the long legs of high drivered steam engines out on an unequaled show.

The throttle was eased back as gradually the exhaust pace quickened, growing shorter and shorter with each few hundred feet. The thin exhaust of an oil burner gradually arced back till it laid parallel above a roof line staying that way till another stop miles away. Rods beat a tattoo off steam chests, wheel spokes blurred and high drama was performed twice daily as the *Daylights* went speeding through farmland to either flank.

When diesel power took over it was in the form of Alco PAs, usually a duet of blunt nosed cab units back to back. Their bright orange and red image and their sense of modernism lent greater continuity to a streamliner's image, except again for the mountains where they usually picked up a helper in the form of a black and silver road switcher, often of Alco heritage itself. In those early days of all-diesel operation the helper was often a separate operation with its own crew but later on it was to become simply a matter of taking away or giving back an extra unit with a single crew in command.

The Alcos were not up ahead for long and soon the silver and black of EMD's omnipresent "F" styling became a permanent fixture on the Daylights. Eventually their early

Between trips a Daylight engine assigned to powering the San Joaquin between Oakland and Bakersfield idles at the Oakland roundhouse.



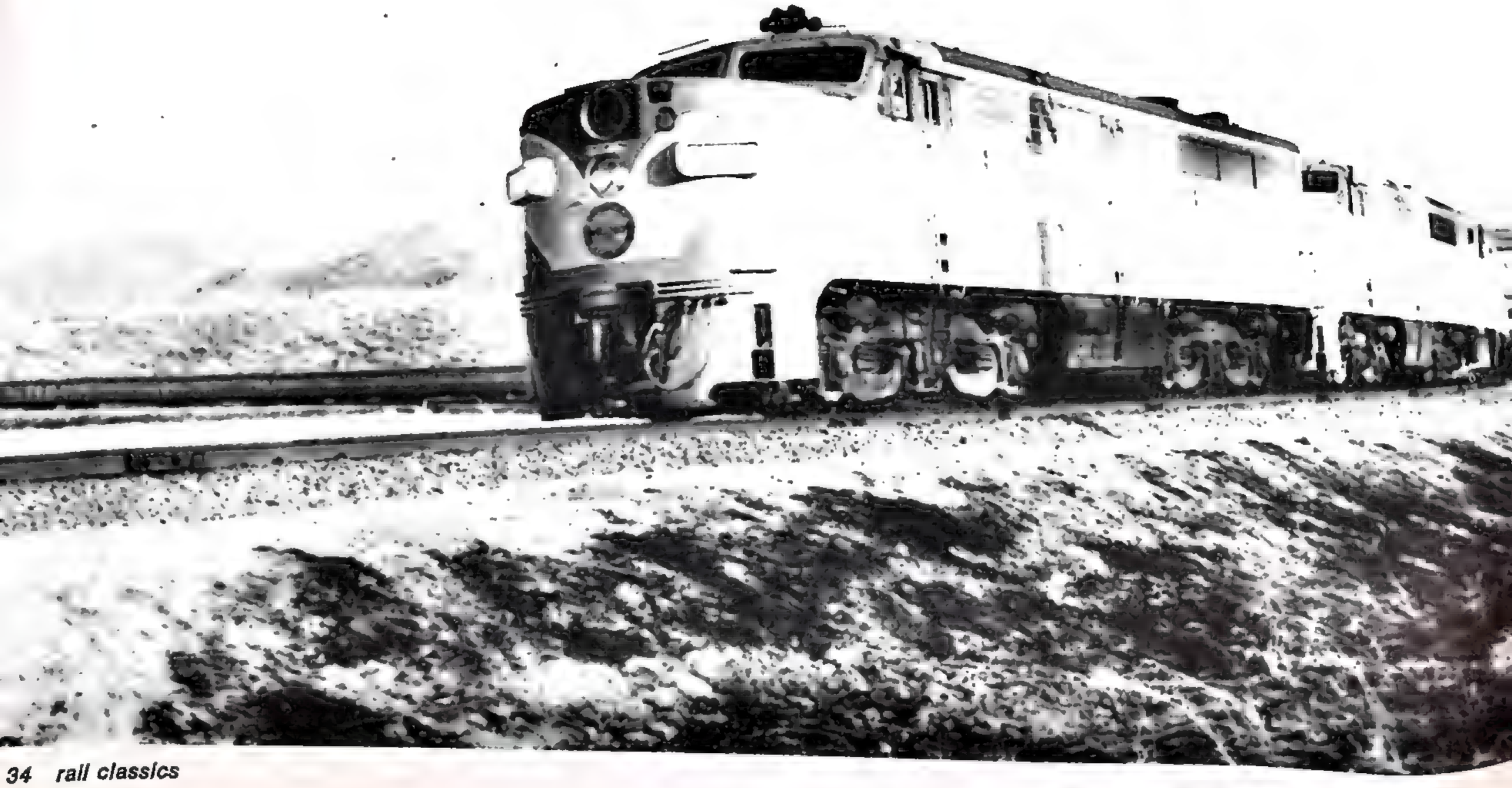
In the late 1940s two 4-8-2s slip out of Los Angeles Union Passenger terminal with the northbound run. At Bakersfield the lead engine will be pulled off.

Orders for the Daylight . . . at speed the southbound train picks up some flimsies from the stand at Newhall.

colors were converted to an all grey motif which was to prove long lasting, that image lasting almost to the end. The final power that worked the *San Joaquin Daylights* was the SDP-45, sometimes in twos but more often than not just a lone unit. Like so many other once splendid varnish runs, rains 51 and 52 had fallen upon hard times. A few tired, high mileage cars and a lone diesel carrying out the final ritual, only government bureaucracy pretending that times had not changed disallowing calls for abandonment.

The end came in 1971, the *San*

In early evening the southbound train reaches around a sharp curve north of Saugus.

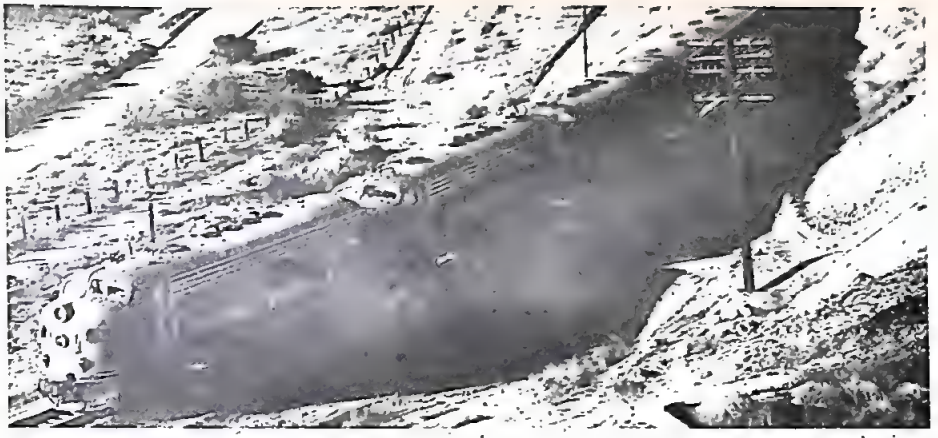


beginning the assault of the
achapis, the "San Joaquin" makes
ling around the curve at Caliente.
ald Duke

Number 51, with an A and two B units, rolls through Soledad Canyon just before entering the Los Angeles basin. T. H. Gildersleeve

A round end observation makes the "San Joaquin Daylight" look like a complete train, something that was not always the case. T. H. Gildersleeve

Towards the end of its existence the northbound San Joaquin is abbreviated and now hauled by F units in the solid grey motif.

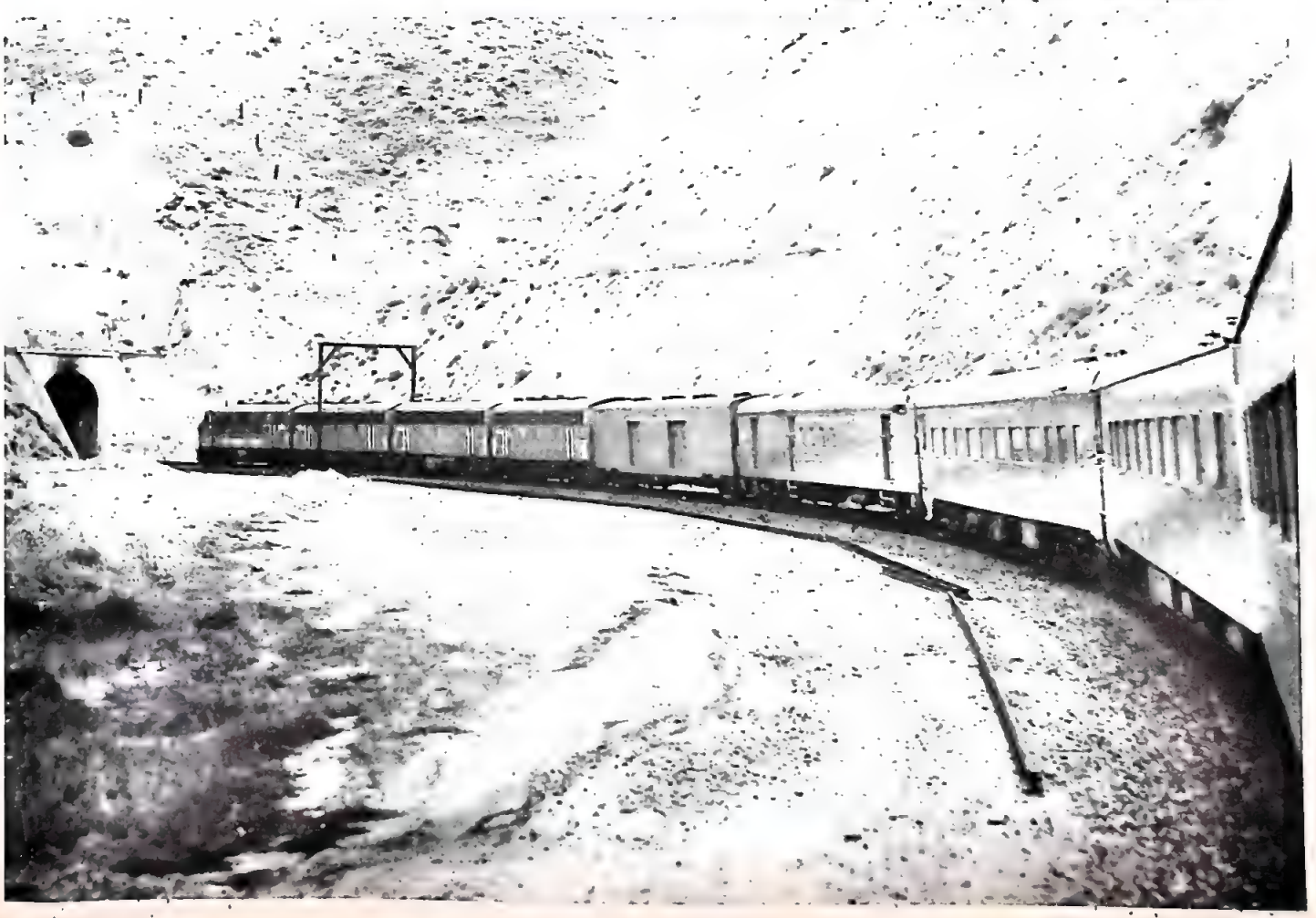


Joaquin Daylight fading to just memory. Unlike the coastal roadbed which proved attractive to Amtrak, the roundabout way up the valley had few supporters and no more passenger traffic over the Tehachapi Loop.

Every language has a term for it. Finis, kaput or perhaps something a wee bit more melodramatic. But in railroading its called simply "the last run." Unlike a Chinese funeral there were no bands, no merriment just no more train orders addressed to "Conductor and Engineer" Train #51 or Train #52.

A foggy winter morning finds #51 gliding by the depot at Saugus.

A weekend trip on the San Joaquin occasionally saw heavy traffic and four units on the Bakersfield-L.A. run. In the middle of the Tehachapis the southbound train is about to enter a tunnel.



AMTRAK PORTFOLIO

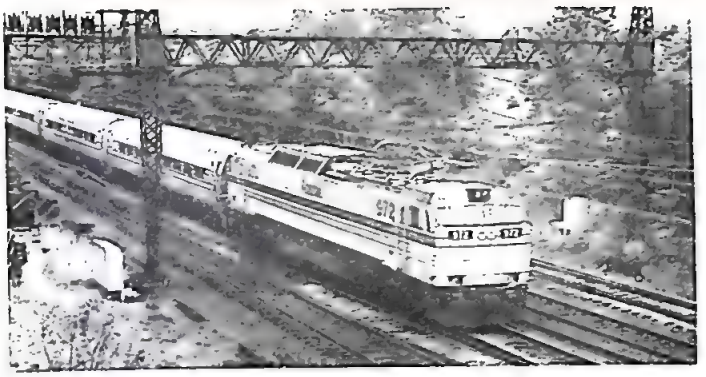
A photographic look at the National Railroad Passenger Corporation through the years.

Since that day in May in 1971 when the nation's railroads stepped away from passenger service (with a few exceptions), Amtrak has been the operator of a vast network of passenger trains throughout the United States. Short haul, long haul, special service and even commuters, through a provision of DOT called 403b, the trains have varied in equipment and service, but have provided quite a show for the rail photographer.

We present here a sampling of Amtrak as seen by many of RAIL CLASSICS readers.

The SAN FRANCISCO ZEPHYR descends the Sierras as it heads for Oakland, the last stop on the transcontinental run between Chicago and the San Francisco Bay area. Bill Rettberg

It's a cold January in 1977 as the French Turbo waits at Niles, Michigan for a helper locomotive. The cold was too much for the unit. Gary G. Allen



The northeast corridor is the most heavily trafficked of Amtrak's routes, and here a new General Electric E-60 leads a string of equally new Amfleet cars through Devon, Connecticut. J. J. Young, Jr.

Not happy with the looks and amenities of the French built Turbos, Amtrak contracted with Rohr Corporation, the result being a very streamlined multiple unit train. A five car set is seen here operating as the southbound ADIRONDACK, near Willsboro Bay, New York. Ronald N. Johnson

Before the arrival of Amfleet equipment, the SAN DIEGAN had standard Santa Fe passenger cars and SDP40Fs for power. This train also sports an E-8B unit as it nears Miramar, California in October 1975. William D. Middleton

The BROADWAY LIMITED prepares to depart Pittsburgh, Pennsylvania at night with a pair of SDPs on the point. In another nine hours the train will be in Chicago, where it will then return to New York City. William Metzger

It began life as the SUPER CHIEF, was combined with the EL CAPITAN by Santa Fe, and finally became the SOUTHWEST LIMITED under Amtrak's operation. Here a fourteen car train works its way up Raton Pass in Colorado. Maurice B. Quirin

Train 85, the southbound CHAMPION makes a swish as it crosses the Monroe River bridge, a bascule structure of the Seaboard Coast Line, crossing the St. Johns River in Sanford, Florida. Thomas P. Cheesborough

50 Amtrak

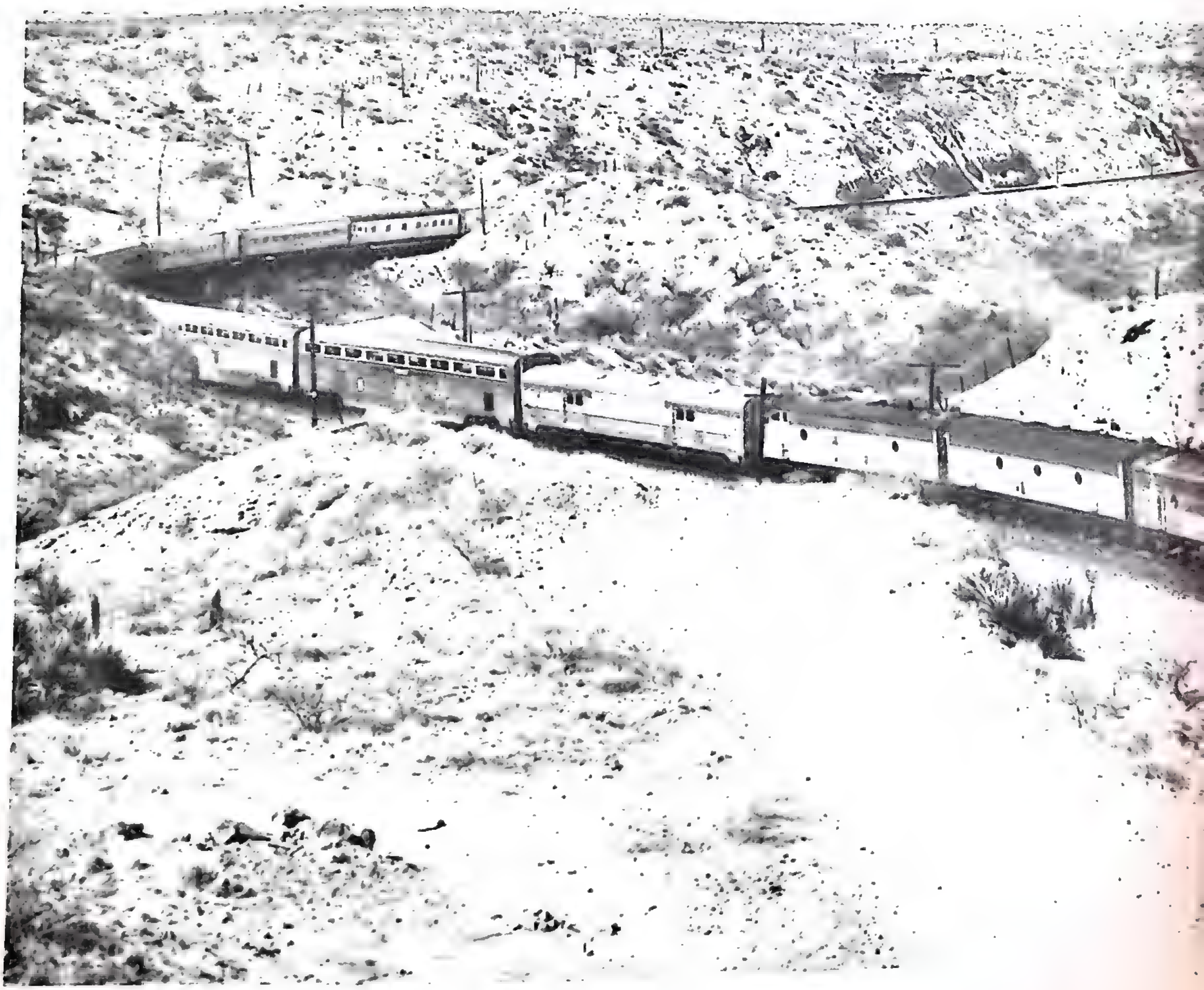
Back in 1974 it was still possible to see non-Amtrak equipment, such as this Union Pacific baggage car. The train is the westbound San Francisco Zephyr at Colfax, California led by two SDP40Fs.
Carter D. Cram

416
416

k E-units worked the SAN DIEGAN veen Los Angeles and the California der city, but were finally bumped this service with the introduction mfleet equipment and EMD F40PH els. Miles Moran

The SHAWNEE, northbound, en route from Carbondale, Illinois to Chicago, roars through Odin, Illinois a few minutes past 5 p.m. on a beautiful midwest May afternoon. At 90 mph, #392 blows for a couple of highway crossings, crashes over the B&O diamonds, and is gone. George A. Forero, Jr.

One of Amtrak's shortlived ventures was the Las Vegas Fun Train, a weekend service between Los Angeles and the Nevada gambling city. Poor scheduling and lack of ridership condemned the train to a quick death. Denis Dunning



Back in 1974 the SUNSET LIMITED was hauled by an unmatched set of Southern Pacific FP7As. A few weeks later they were replaced by a pair of SDP40Fs. The scene is Davidson Canyon, 25 miles from Tucson, Arizona.
Glenn Anderson

A Metroliner gets a helping hand from "grandfather" GG-1 #926. The Budd built train had trouble with its electrical gear caused by the powdery snow in January 1977. Bill Rettberg

Alexandria, Virginia is greeted by the SENATOR in July 1977 with a newly painted SDP40F. The rails belong to C&O and weeds are slowly taking over the pasenger platform, but the riders and the photographers still come. Curt Tillotson, Jr.

By Gary Dolzall

THOSE EMD SPEEDSTERS

Since 1934, Electro-Motive Division has held the lead in producing passenger diesels in all shapes and forms, from highly customized one-shots to mass produced E units.

The date: 1934. The place: Chicago, Illinois. Times are hard, jobs and money scarce. It is May 26th, opening night for the second year of Chicago's Century of Progress Fair, and a crowd is milling around expecting a guest from the west. At 8:09 p.m. the Saturday night crowd cheers, The Zephyr—Burlington #9900—has arrived.

With the Zephyr's arrival a new era of American railroading took a giant leap. The diesel stepped into the limelight, and likewise, Electro-Motive, the force behind #9900, matured. Electro-Motive would become synonymous with diesels—FT#103, thousands of geeps, F's, and E's— total dieselization. #9900 christened an era at Electro-Motive as well: 30 years of streamlined passenger power would follow.

Electro-Motive's passenger story begins, not with #9900, but on May 24, 1933, the day Union Pacific ordered Electro-Motive's and America's first streamliner, the M-10000. A month later, Burlington president Ralph Budd put #9900 in EM's order book. Union Pacific opted for the railcar proven Winton 600hp distilate engine. Budd was impressed with the perseverance of the Winton 201A diesel; it would go in #9900.

Pullman-Standard finished construction of M-10000 in February, 1934. Costing slightly less than $1,000 every twelve inches, the 204 foot, three-car speedster looked more like a Jules Verne submarine than a passenger train. Sporting a grilled bulb nose and a turret cab, M-10000 spent the spring of 1934 on a coast-to-coast ramble.

Electro-Motive, and the Budd Company of Philadelphia meanwhile, were putting the finishing touches on #9900, including the 8-cyclinder, 600hp Winton diesel. By April of '34 #9900, the first *diesel* streamliner, was ready. The Zephyr warmed up by testing around Philadelphia, then headed west for that famous dash that put "diesel" permanently in the railroad vocabulary.

Sleek #9900 arrived in Denver on May 24th. The plans were readied. The charge would begin at 4 o'clock, the morning of May 26. By dusk the Chicago arrival of the silver newcomer would climax the "wings of a Centuary Pageant" at the fair. History records the successful result, but . . . on the evening of May 25, as Ralph Budd spoke over radio of the coming trip, Denver shopmen were frantically placing a new traction motor armature bearing in #9900.

The Zephyr wasn't reassembled until 3:30 a.m. After servicing, a trip to Denver Union Station, and loading, #9900 slipped out of Denver at 5:10 a.m. 1,015 miles, and 1,400 grade crossings away lay Chicago.

It took 13 hours, a 77 mph average and bursts of speed to 112. As the sun settled behind her, #9900 bolted through Aurora and slipped onto the center track of Q's three-track main into Chicago. Under a twilight sky the Zephyr clipped the tape strung across IC's tracks leading to the fair at 7:10 p.m., 59 minutes later the Zephyr received her acclaim.

#9900 joined her historic rival from the Union Pacific at the fair. While M-10000 remained in Chicago throughout 1934, #9900 embarked on a tour similar to M-10000's spring travels. U.P. could afford the luxury of M-10000's idleness, by late summer their streamliner punch had doubled.

M-10001, a six-car look-alike to M-10000 was loose. Power: a Winton 900hp V12 diesel. In October of 1934 U.P.'s newest hit 120 mph while running a 57 hour spree from Los Angeles to New York. Next it was Burlington's move and on November 11 #9900 became the first streamliner to enter regular service. The route: Lincoln, Nebraska to Kansas City.

As 1935 rolled in, plans were progressing on Electro-Motive's new plant at LaGrange, Illinois. Until the plant's completion, H. L. Hamilton's Electro-Motive would remain basically a contractor relying on Pullman-Standard, St. Louis Car, GE-Erie, and Budd for carbodies, GE or Westinghouse would supply the electrical gear, and fellow GM affiliate Winton the powerplants. The head offices of E-M in Cleveland were busy though. Orders were arriving as Hamilton and designer Richard Dilworth were plotting their next assault on steam.

M-10000 finally entered regular service on the last day of January, 1935. Christened the *City of Salina*, distilate powered M10000 intrigued passengers between Salina, Kansas and Kansas City.

The streamline era got its first eastern entrant in February, '35 when Electro-Motive delivered Maine Central/Boston & Maine #6000. Churning up dust between Boston and Bangor, Maine, #6000 was a Zephyr look-alike. Along with a joint MEC/B&M placard, a pair of red outlined wings adorned

OF DENVER
CD 05

LA-1
CITY OF LOS ANGELES

Only two A and four B E2s were constructed, all for the Union Pacific operated City of Los Angeles and the UP-SP City of San Francisco. The distinctive units with their bulbous noses were constructed in 1937. Union Pacific photo.

Rock Island had EMD customize a pair of E6 boosters with complete controls so when the Colorado Springs and Denver sections of the Rocky Mountain Rocket joined to make one run, the train would still have a flowing appearance. #70 and #751 had a single 1000 horsepower prime mover and a baggage compartment each. Gary Dolzall photo.

her sides. Where #9900 wore "Burlington Route" on her sloping nose, the #6000 carried *Flying Yankee.* Like #9900, a Winton 600hp 201A 8-cylinder diesel supplied the power for #6000. Unlike her western sister, #6000 carried passengers in the rear third of the power car, the Zephyr carried baggage.

Back in Chicago, the Burlington celebrated the birth of twins on April 21, 1935. Zephyrs #9901 and #9902. *The Twin Zephyrs* entered service between Minn.-St. Paul and the Windy City.

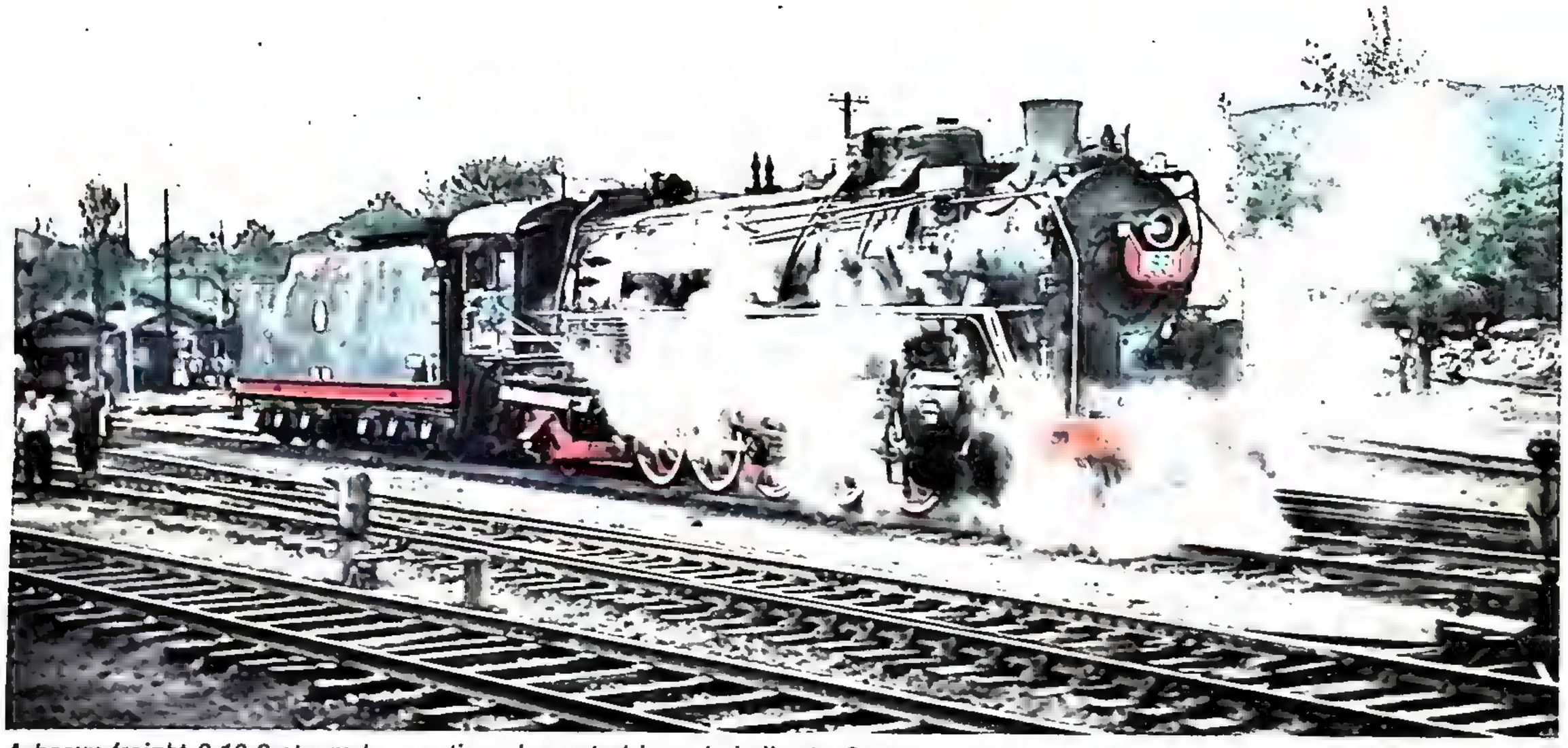
The duo, like older sister #9900, were 600hp, three car racers. Union Pacific's M-10001, re-equipped with a 16-cylinder 1200hp Winton diesel, got into the Chicago act on June 6, 1935 entering regular service as the *City of Portland.*

Then, just as the steam fraternity readied their arguments against diesel lightweights, Electro-Motive struck again. The varmits were not flashy this round, but their sting, their lasting implication, was even more deadly to steam.

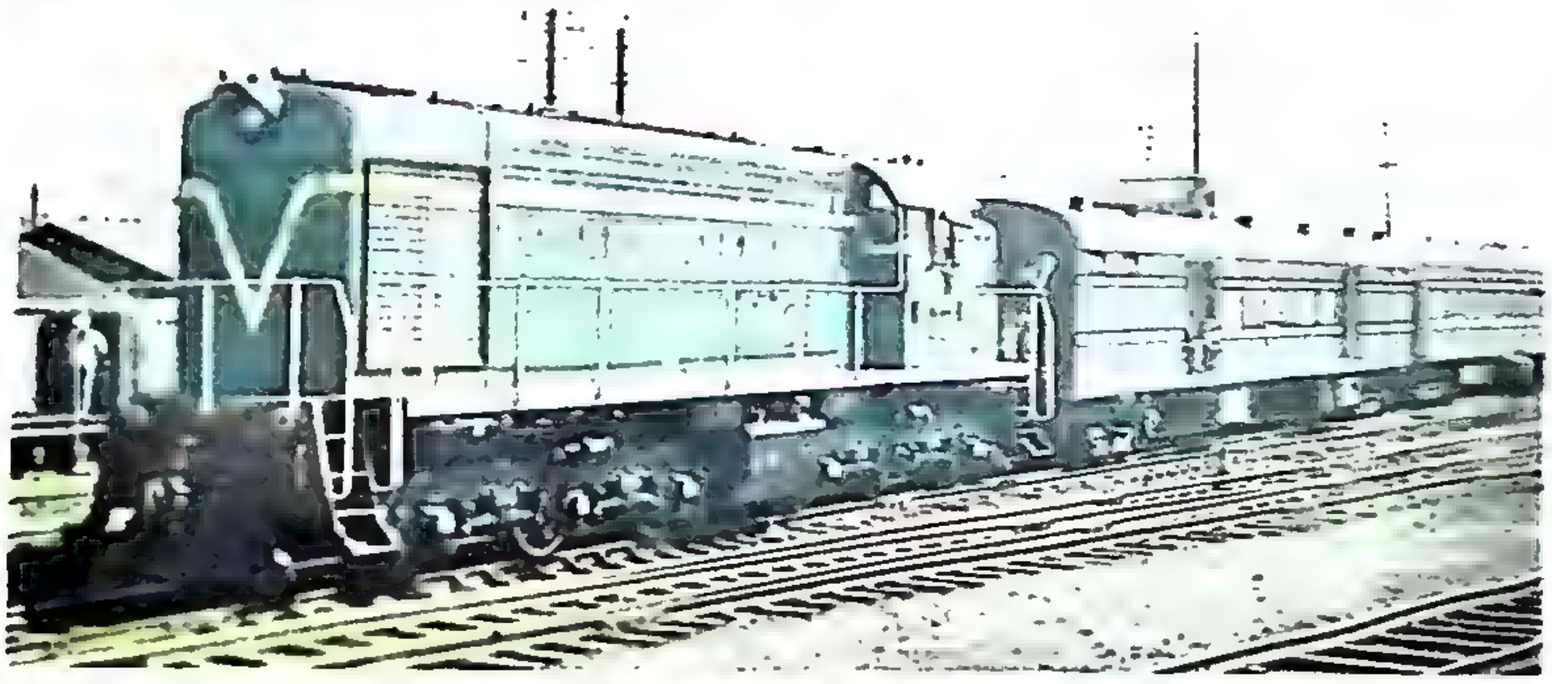
There were five; EMC #511-512, B&O #50, and Santa Fe #1-1A, the latter in short, "Dilworth's Boxcars." In early 1935 Dilworth seated himself with his role of brown grocery paper (he preferred it to more conventional design sheets), his goal; beat steam at its own game. His answer: EMC #511-512, a boxcab duo that packed a 3600hp wallop. Actually preliminary plans impressed the B&O and ATSF

(Continued on page 86)

Heading south, a pair of Gulf, Mobile and Ohio E units power the Abraham Lincoln on its way to St. Louis. Today, the orange and red of GM&O have been traded in for those of Amtrak. Ernest Ronaldson collection.



A heavy freight 2-10-2 steam locomotive, decorated in red similar to German treatment, steams away in the yard.



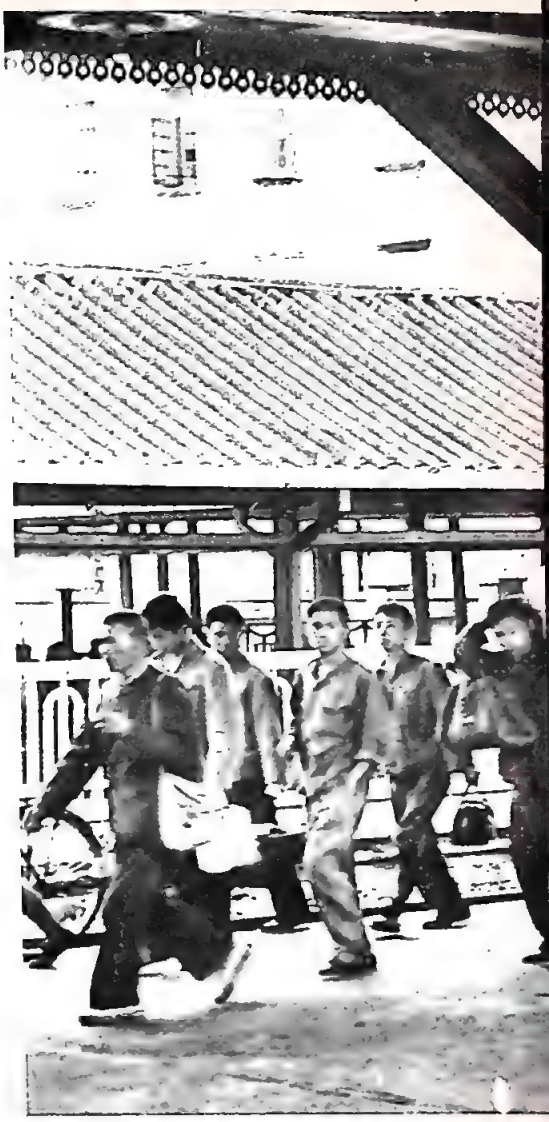
A French built diesel is used for passenger service. This unit is a C-C version rated at 2000 hp.

A typical scene at the station with a great deal of passenger train operation. Note the bicycles being loaded.

By Hobert E. Duncan
Photos by the author

TRAIN TRAVEL THROUGH CHINA

A glimpse of railroading in a country that is now being opened up to Americans.



A year and a half ago, my wife, our young son and I toured the People's Republic of China, an ancient land of intrigue for the Westerner ever since Marco Polo became its first European tourist 700 years ago.

Despite the "ping pong" detente of 1972 which partially ended 25 years of enforced isolation between China and the United States, visas to visit the country still are not that easy to come by. We were twice fortunate. My job as editor of the *Honolulu Star-Bulletin* helped. So did the friendship of a Honolulu businessman who has maintained close ties inside China since World War II.

After much correspondence, the prized visas to China were granted and we embarked on one of the great travel adventures the 1970's have to offer.

We traveled on trains for approximately 2,500 miles in China, including one 32-hour trip spanning 1,500 miles across the rice basket of south China. Our first taste of public transportation in China was at the border dividing the People's Republic of China from the British Crown Colony of Hong Kong.

The border train from the international bridge to downtown Canton is China's showpiece. Air-conditioned, equipped with soft seats and attentive attendants to serve tea, the train is in considerable contrast to the dingy, sometimes dirty and nearly always crowded Hong Kong train which bring travelers to the border.

The contrast, quite obviously, is not accidental. The Chinese hope the conclusion will be drawn: "You are now in China. The real China. See the difference?" Most people do.

In defense of the British it should be noted that the train from Kowloon through the New Territories is a commuter train, with businessmen, students and housewives crowding its cars. The train from the border north to Canton is no commuter; it is an express, transporting visitors to and from Canton in non-stop, air-conditioned luxury.

Possibly there are other air-conditioned trains in China but we didn't encounter any in the rest of our travels until it was time to leave China nearly four weeks later and we took the same train back to the border.

This luxury train is just that. Green, with yellow trim on the outside, it is immaculate on the inside. Large rectangular windows offer a fascinating panorama of green rice fields, villages and the hills of south China. White lace curtains frame the windows and the comfortable seats have antimacassars on the headrests. A small table underneath the window is for the tea cups which a stewardess brings, along with a kettle of boiling water, after the train has started.

A loudspeaker in each car blares forth revolutionary music, a shade louder than most people would have it if there was a volume adjustment.

The train is powered by a diesel locomotive over a satiny roadbed. There is little outside noise and almost no rocking or swaying as the train proceeds at a reasonable pace through the countryside.

This was our introduction to Chinese railroading. Before we were to reboard this train to return to the border after our odyssey in China, we would ride the rails from Nanking to Shanghai, from Shanghai to Hangchow (Hang-Chou) and from Hangchow to Canton.

Almost all our rail travel, except

The depot at Canton is alive with activity, reminiscent of the thirties and forties in the U.S. It would appear that photographers are quite a diversion for the Chinese.

Workmen wheel baggage across the international bridge between China and Hong Kong, the beginning of the trip.

for the border trains, would be behind steam, an experience my wife and I had not had for at least 30 years and an entirely new one for our 9-year-old son who has ridden trains extensively on the U.S. mainland and in Canada and Europe but always behind diesel or electric power plants.

Steam is the cornerstone of railroad nostalgia in this country but possibly those who get misty-eyed at the thought of a steam locomotive pulling a string of passenger cars through the night have forgotten some of the problems. But more of that later.

The rail network has been extended, noticeably south of the Yangtze River and in the West. Also, the distance between Peking and Moscow—the capital of China's one-time Communist ally—has been shortened by 700 miles. In addition, substandard track along many existing routes was replaced and upgraded.

Our most interesting train experience in China came on the 32-hour trip from Hangchow to Canton.

We took the trip in May and already south China was steamy. The days

were lengthening and the temperatures must have been in the 90's.

We were booked from Hangchow to Canton aboard a "sleeper," although we were to discover that this was somewhat a misnomer.

We boarded the train at 11 o'clock on a bright spring morning. Already the day was starting to turn hot. The train, consisting of about 12 green cars behind a red-wheeled steam locomotive, pulled into the Hangchow station two minutes late.

For the three of us the cost was 220 yuan or about $110. This included our basic fare for the 1,500-mile trip, a sleeping compartment and four meals.

Our compartment was a compact room with a large viewing window. Four bunks (two above and below on either side of the compartment) served as seats during the day and beds at night.

Under the window was the ever present table, covered with a crocheted doily on which there were tea cups, a thermos bottle containing hot water and a potted plant, leaving no room for elbows, notepads, cameras or purses.

There were lace curtains at the window and lace antimacassars on the backs of the seats.

For ventilation, we had a small oscillating fan suspended from the ceiling, which, to our happy surprise, worked during the day. On our previous train rides, the electricity had been off during the day.

All the passengers in our car were foreigners. An overseas Chinese family from Singapore, several overseas Chinese men and the very proper military attache to the British ambassador in Peking, traveling with his wife and Chinese-speaking aide.

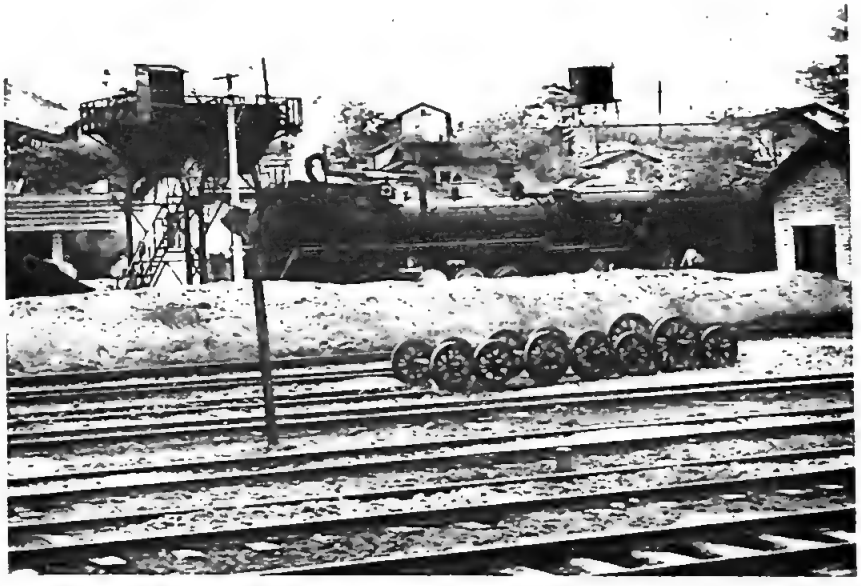
Our guide from the Foreign Office, Li Chun-yen, was traveling with us. He sat with us during the day in our compartment, answering our questions about the countryside. At night, Mr. Li discreetly retired to the compartment next door where the overseas Chinese men had a spare bunk.

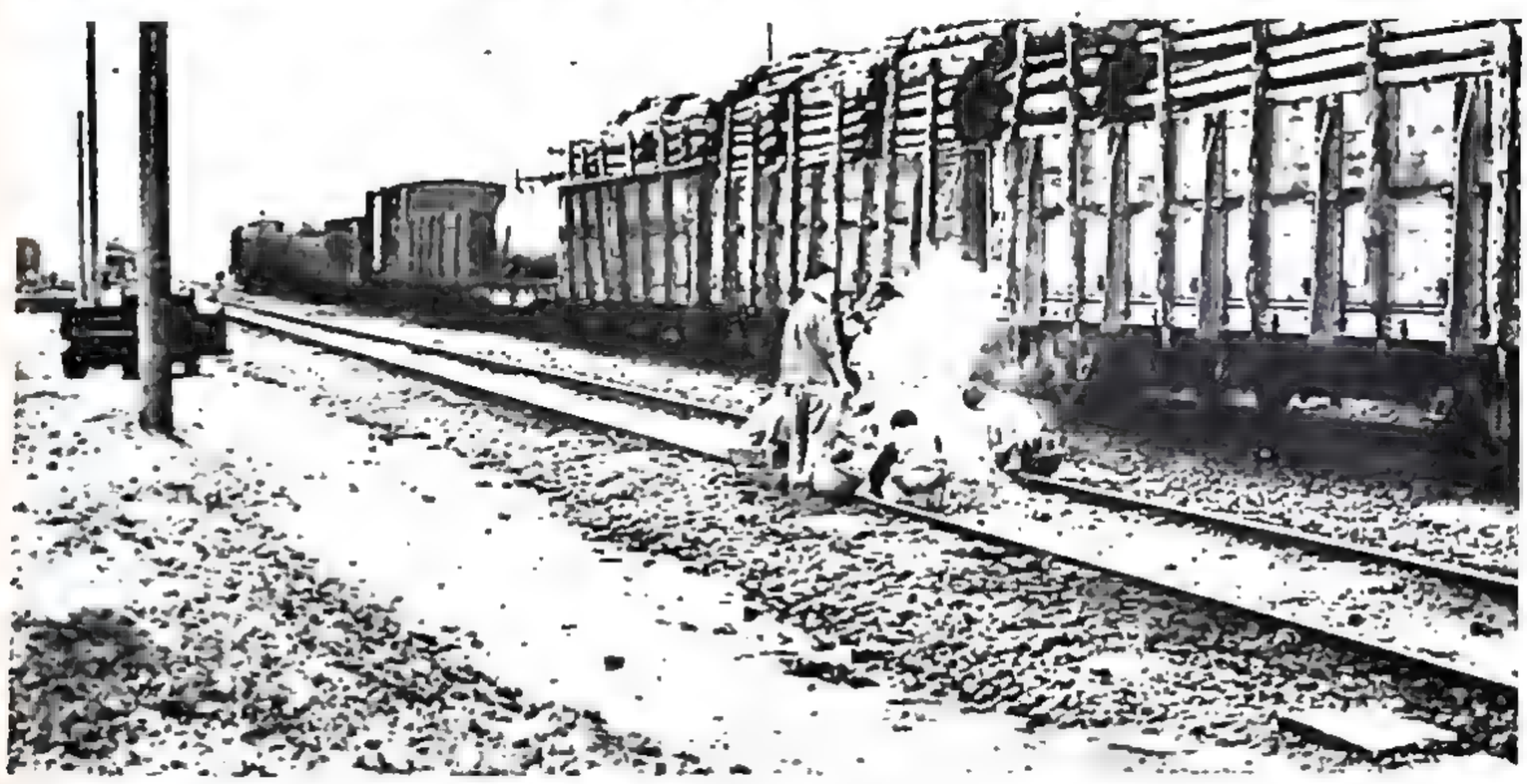
As the train pulled out of the Hangchow station, clouds of black smoke drifted back to engulf the cars as the locomotive strained for acceleration.

"About how many stops are there between here and Canton?" we asked Mr. Li.

He guessed there were at least 10. This was an approximation somewhat wide of the mark. We must have stopped at least 50 times during the trip and inbetween stops we rarely seemed to exceed 50 miles an hour as the train snaked through breathtaking scenery.

We sat on sidings in many stations and for unexplained periods in the open countryside much to our puzzlement. We finally were told that we





A steam locomotive drops its ashes and leaves to be replaced by another. Children gather the hot coals for heating while waiting for the new power to arrive.

Baggage car activity at a station. The rear of the baggage car can be seen loaded with bikes.

were on a single track and our train had to maintain exact schedules in order to be at the passing sidings when meeting oncoming trains. If a train was running late or early, it had to get off on a siding and wait for the approaching train which, theoretically at léast, was on time. With this bit of intelligence we became more tolerant of the frequent stops.

At nearly every station, my wife and I were filled with nostalgic memories of our childhoods in Iowa, when passenger trains were at their zenith. Both of us grew up near railroad yards; and the smell of heavy coal smoke, the sounds of switching cars and the moan of steam whistles in the night figure prominently in our memories.

To travel the railroads of China is to go back in time. At the stations, coal is piled near the tracks, a scene that has not presented itself in most American trainyards for some decades now. There are no fences or guards around the coal piles, because thievery has practicalky ceased to exist in the new China.

At scheduled stops, water was pumped into the locomotive's boilers from huge hoses. "I'll bet there's no featherbedding with these firemen," I told Arlene, imagining the hard work of keeping a hot blaze in the firebox.

The dining car was next to our car, separated by a swaying vestibule where huge wicker baskets of fresh eggs awaited the skills of the cook. We went to the diner for lunch about an hour after we left Hangchow.

"Do you want Western food or Chinese food?" Mr. Li asked as a waiter in a white apron approached.

Chinese food would have been fine for Arlene and me, but in deference to Christopher, who was tiring of three Chinese meals a day, we chose Western food.

It was a big mistake.

While fellow diners got their Chinese food quickly, we whiled away our time on swaying metal chairs (not bolted to the floor) by drinking beer and orange soda. Meanwhile, the Cook was struggling with our Western fare.

"I guess we should have eaten off the land," Arlene commented wryly.

When the meal of meat patties, fish and french fries finally arrived, it was acceptable but scarcely worth the wait. But Christopher thought the food was heavenly and stoked up on the calories he had been missing on his steady Chinese diet.

Satisfied that Christopher at last had a full stomach, I suggested to Mr. Li that we try Chinese food the next meal.

"Oh, no, Western food is fine with me," he replied gamely. So Western food it was for the rest of the trip.

Every meal became a waiting marathon as the cook battled valiantly—

(Continued on page 98)

The author's train waits in a siding as a steam powered freight rolls by on the mainline.

A steam powered freight train crosses a double-decked river bridge at Nanking China.

LONGTIME IN CAJON

The air is clear, the temperature mild and the San Bernardino Mountains are still covered with snow as a Union Pacific freight works up the southline to the Summit of Cajon Pass in April of 1979. Denis Dunning

A Warbonnet Bites the Dust

No locomotive ever served a passenger fleet as faithfully as Santa Fe's red and silver F units.

By Don Sims

Photos by the author

Unlike many carriers which came to depend upon the larger, twin engined "E" series of passenger locomotives for their diesel passenger trains, Santa Fe long followed a policy of sticking with the basic "F" style of carbody unit, both in strictly first class service and in a dual freight/varnish mode for certain examples. Other roads, Western Pacific for example, followed a similar course but none were so famous as the red and silver units that plied southwestern states.

There were to be sure aberrations from the exclusive utilization of "Fs," like the famous Alco PAs and early on a few Fairbanks Morse examples but for the most part it was the "F" style that kept system wide passenger trains on the money. Even the Alcos, famous

Between runs, F unit #300 rests at Redondo engine terminal in Los Angeles in May of 1973, now serving Amtrak instead of the Santa Fe. Geoff Auburn

Who said diesels don't smoke? The westbound El Capitan with its hi-level equipment is pulled through a series of curves by a brace of Fs.

though they became, were normally relegated to secondary trains, ultimately finishing their career on such as #7 and #8, the rather celebrated if not overly fast mail runs between Chicago and the West Coast.

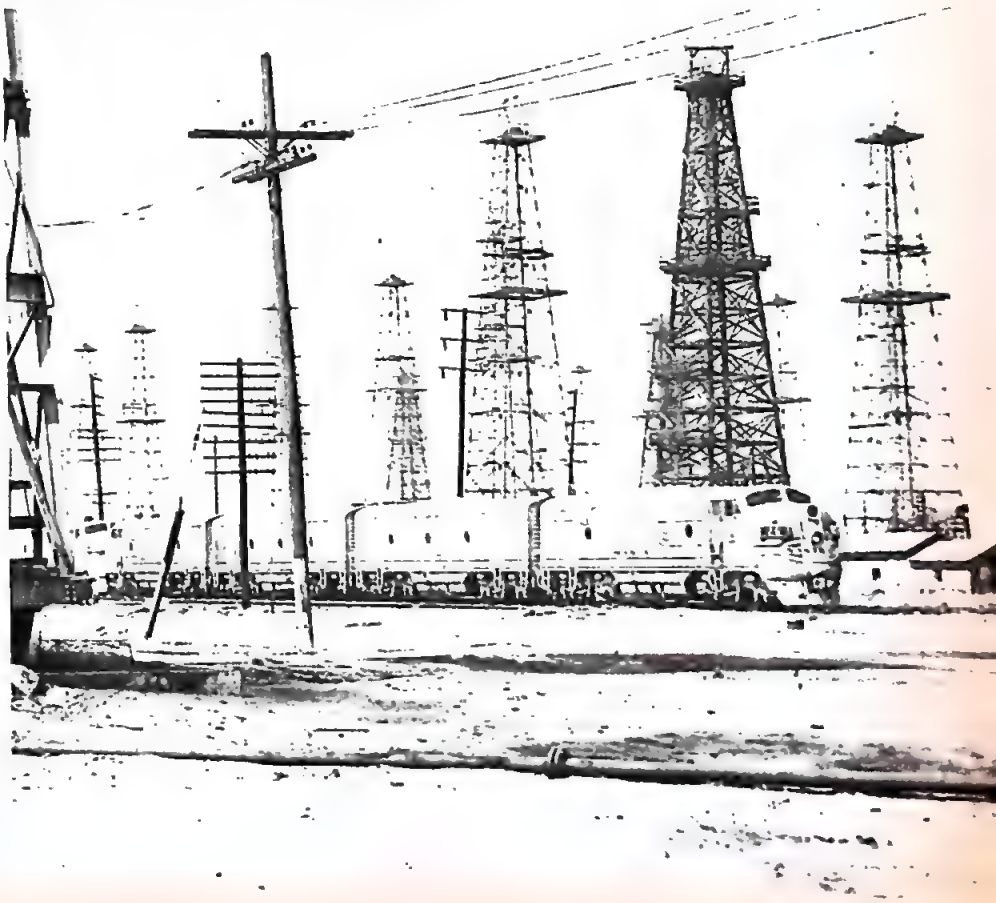
It was to be however the EMD "F" unit of bright styling and passenger train gearing that was committed to high speed action in multiple strings —sometimes running to five or six units—that was to provide a foundation for all those postwar years when the "Chief," "Texas Chief," "Super Chief" and "El Capitan" along with their lesser brethren rolled up millions of miles in revenue service. As they waxed and waned in their old age, burdened by the impetus of service, changing times and Amtrak's creation, their presence was subjected to a floodtide of awareness and interest. Yet before they ran out their mechanical heartbeat there was a time, when Santa Fe "Fs" were typically routine fare, taken in stride as if they would always be on the point of an "El Cap" on racing across the flat fields and high desert with a pre-printed precision that would never end.

This is another era which time, that fleeting arbitrator of man and machine, has closed, changing the scene as if in a movie script.

"No mud hens allowed."

Never quite expressed this way, nevertheless the feeling was ever present. When a Santa Fe passenger "F" was called for the point of a varnish run it had better be in high class visual condition, nose wiped off and the grease and grime from a previous

These oil well derricks no longer split the horizon at Santa Fe Springs, Calif. Gone too are the Fs and Santa Fe passenger service, though Amtrak runs still use this line.



Meadow Gold Butter
Beatrice Foods Co. - Chicago Plant
Chicago Cold Storage Division
SANTA FE

The set of standard, heavyweight cars identifies this as the Grand Canyon, this time with only three units in lieu of the usual four.

Normally the F7s were used in four and five unit consists on the western divisions of Santa Fe's far flung empire.

Leaving Chicago westbound in 1950.

Busy time on the main at the top of Cajon Pass. The westbound mail train with green flying for a second section passes the eastbound Chief (left) on its way to Chicago.

trip removed. The mechanical department as is often their lot might have provided some caustic comments about the inner workings, but externally that Santa Fe image was polished.

Just like in the ads.

If one were to select a section of roadbed, one piece of Santa Fe's vast empire in which to express the vision of an "F" rolling high with passengers it might be Arizona and New Mexico, or possibly Cajon Pass. Kansas and Illinois were good for speed, suggesting that just about anywhere it exhibited was good country to visualize the "Fs" in action. In retrospect it wasn't anyplace, it was everyplace.

During daylight hours the famous names ripped along for mile upon fast paced mile, gobbling milepost numbers with a ravenous appetite. In the lee of western mesas and sandstone cliffs or gliding through the maze of Kansas City Union Station, the red and silver units always stood out. At night they spirited slumbering passengers over the darkened landscape, Mars lights pirouetting in incandescent patterns that wove themselves into hundreds of miles of steel ribbon.

One outstanding example though will always stay out front, the summer months during those high water periods when an El Capitan strode firmly onto main line iron in two sections. Green flags standing taut in an all out breeze, the set of F units screaming in wound up energy, often treading just below the century mark. Rearward —not too many block signals behind— came a second section, just as hot and equipped with a like number of units. Evenly matched in time and space the twin trains ran hell bent for whatever place they pointed to.

Night was an especially fascinating scene along the great open spaces where from some elevated position one could grasp a line of lighted signals disappearing into a void. Ahead of a shimmering headlight the call was all green, behind it a mixed bag of reds and yellows trailed towards the viewer. Hardly had a yellow cleared to green when a second headlight glared off its target—the following El Capitan wasn't far behind in this pattern and it foretold an act stretching across two-thirds of a vast continent.

Rolling into Albuquerque, Raton, La Junta they came. First a pinpoint of light, then gradually growing into a surrounding nose of red, the F's kept 'em rolling.

Over many years this parade of Santa Fe stainless steel streamliners and the heavy weight standards attributed to secondary, less hurried runs plied their daily chores. Whether leading some shining beauty through darkened canyons of a Raton or slipping

(Continued on page 96)

COMMUTING IN BRITISH COLUMBIA

VANCOUVER'S BRITISH COLUMBIA ELECTRIC RAILWAY WAS THE CANADIAN EQUIVALENT OF THE SPRAWLING PACIFIC ELECTRIC

BY IRA L. SWETT

There are those who fondly dub Peninsular Railway of San Jose, California, "Pacific Electric of the North." There are good and sufficient grounds for this appellation to have validity: Peninsular's biggest interurbans were identical to PE's largest wooden interurbans, 1001-1044; Peninsular's medium interurbans were exactly the same as PE 530-549; Peninsular's big box motor was built by PE on the same plans as its own 1451 Class; Peninsular's steel locomotive was the spitting image of PE 1601-1615 Class. All of these Peninsular cars save the box motor wound up their days on PE, working with their respective twins out of Los Angeles.

But to the writer, an even closer kinship to PE could rightfully have been claimed by British Columbia Electric Railway of Vancouver, B.C. Overlooking the obvious commonality of color schemes, consider these similarities:

BCER operated out of its largest city through two separate, disassociated stations, as did PE. BCER's trunk line was Central Park, with frequent trains on double track private way; PE's was dual in nature—a four-track trunk system to the north and a similar throat to the south. BCER's trunk merged into a single track interurban line which wound through the lush countryside to Chilliwack; PE's comparison would be its San Bernardino line. Both were heavy freight haulers, and both used red Baldwin steeple cabs as basic power. Both companies operated combines, RPO cars, box motors and trailers. Both companies had distinct families of interurban cars which paralleled each other remarkably closely: BCER's 1000 Class vs. PE's 500 Class, the BCER 1200s vs. PE's 800s, BCER's 1300s vs. PE'S 1000s.

But BCER was much more than merely a junior Pacific Electric. In addition to its functioning as the primary interurban passenger hauler in the Vancouver metropolitan area—and serving as an important freight originating and distributing entity—BCER provided urban transit to Vancouver, Victoria, and North Vancouver through three physically separate rail networks. Hundreds of city cars from turn-of-the-century woods to modern PCCs rolled its rails to the end, and BCER even had its own bus subsidiary. Do all these sound vaguely familiar to PE fans? They should!

But the province of this article is to examine only the rail interurban side of BCER, so to the task.

LINES

BCER operated its interurban lines in groups which it termed "Districts." There were five such Districts operated since the beginning in 1891. Four of these were on the lower mainland and one was on Vancouver Island. Taking each in turn:

District One: Central Park. Here was the system's throat—its jugular vein—extending from Vancouver via Central Park (named in honor of New York City's famed green spot) to the city of New Westminster, twelve miles distant. As early as 1895, cars were regularly making the run in 45 minutes. During World War II, trains were being operated on a four-minute headway during rush periods. The Central Park line operated with remarkable efficiency and safety for sixty years. Trains from Vancouver originated at Carrall Street Station and terminated their outbound runs at New Westminster's BCER Station, another major structure with train concourse. Rush hour turnback service was provided from Vancouver out to Highland Park. Considerable freight service operated on the Central Park line, sandwiched in between the steady stream of passenger consists. The line was abandoned in 1953-54.

District Two. Lulu Island. The line from Vancouver to Steveston via Marpole (14.8 miles) was built by Canadian Pacific circa 1902; this line was leased by BCER in 1905 and electrified. Operating from the Davie St. Station in Vancouver, trains on this line followed streetcar routes out of the city, then entered private way and proceeded on double track to Marpole (6.9 miles). Here District Two branched, with the Lulu Island Subdivision continuing on to Steveston (14.5 miles) and the Marpole-New Westminster Subdivision swinging easterly to join the Central Park line on the outskirts of New Westminster. Through passenger trains operated from Vancouver to Steveston at sixty minute intervals; Vancouver-New Westminster via Marpole every 2 hrs. a distance of 17.2 miles—single track beyond Marpole.

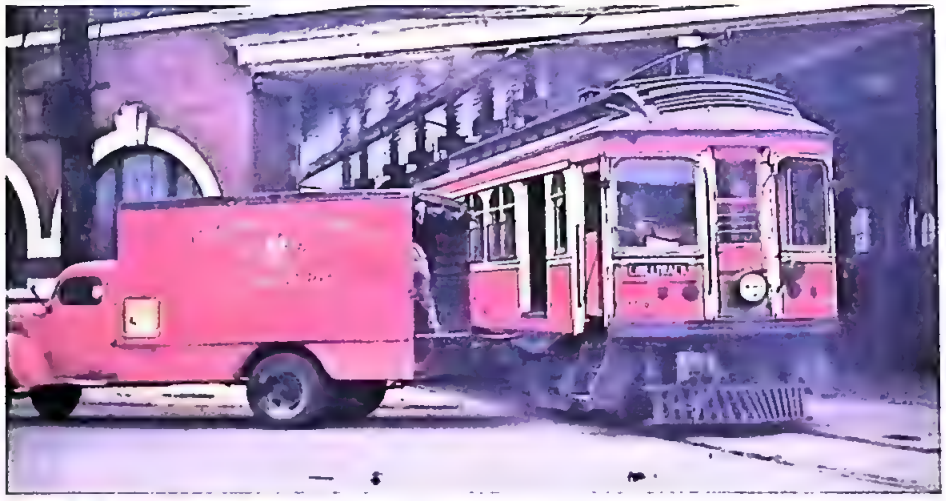
A problem on the Steveston line was the low-level drawbridge over the North Arm of the Fraser River immediately beyond Marpole. Countless trains were held up by ships here, but the bridge was the reason for the retention of passenger service on the line until 1958, as it was felt that replacing buses would only add to the traffic woes on the vehicular span. The last interurban car in BCER history, operated between Marpole and Steveston on Friday, February 28, 1958, when car 1225 brought down the final curtain. Vancouver-Marpole interurbans quit in 1952.

The Marpole-New Westminster Subdivision was also a Canadian Pacific line, opened in 1909 and subsequently leased by BCER. It was never an important passenger line but was immensely important as a freight carrier. The final passenger train operated on this subdivision on November 17, 1956.

District Three. Chilliwack and Fraser Valley. This scenic, single track interurban line extended from New Westminster to Chilliwack, 63.8 miles, through the fertile Fraser Valley. Constructed in 1910, the line was officially opened by Premier Richard McBride who rode a suitably decorated train of new electric cars to the graceful loop in Chilliwack. Usually trains consisted of a box motor leading, then two passenger cars (either a trailer-motor duo or two motors); on occasions of heavy traffic, four cars were operated, in which

All colored photos from Ira L. Swett Collection

Car 1208, inbound from Steveston, pauses at the busy junction point of Marpole in 1949.



Motor combine 1401 loads mail for the Fraser Valley at New Westminster Depot in 1949.

A familiar scene on busy Hastings St., Vancouver, for many years was the comings and the goings of BCERs big red interurban trains.

A Chilliwack train pauses at a typical BCER wood passenger shelter, 1949.

instance one of the cars was almost certain to be a trailer due to power limitations and severe grades.

The crossing of the Fraser River at New Westminster was notable in that BCER shared the single track bridge with two other railroads—the Great Northern and the Canadian National. Triple light signals governed, with the top light assembly for GN, center for BCER and lower for CN. Passenger trains were limited to ten miles per hour over the bridge, freights to six.

The Chilliwack line was one of the major interurban routes of western America and with its passing as a passenger operation on August 30, 1950, much of the romance went out of the Pacific Northwest insofar as interurban historians are concerned.

District Four. Burnaby Lake. Still another rail route to New Westminster was provided in 1911 with the opening of the Burnaby Lake line, 14.7 single track miles from Carrall St. Station to the New Westminster Depot although both ends of the run were made on BCER streetcar lines (double tracked, of course), Usually served by single car trains on half hour headways, Burnaby Lake originally ran via Columbia Ave. in New Westminster to achieve the depot in the Royal City. With the abandonment of streetcars in New Westminster in 1937, the interurban line was cut back to Sapperton, with a transfer to a bus required for those wishing to continue into New Westminster. In Vancouver, this line joined the streetcar network at Commercial Drive Junction. The Burnaby Lake line was shut down in 1953 and its rails torn up; not a trace of the line remains.

District Five. Saanich. Desiring to repeat the success enjoyed by the Chilliwack line which opened up the Fraser Valley to great development, BCER in 1913 opened an interurban line from Victoria north to Deep Bay, 22 miles, via the center of the Saanich Peninsula. Opened in the summer of 1913 (also by Premier McBride) the Saanich line represented an expenditure of more than $1 million, including its short branch line to Meadlands on Patricia Bay. Three-

BCER interurbans halted all street traffic when they emerged from the concourse of Carrall St. Station, Vancouver. Here, car 1000 demonstrates in 1949.

Old interurban 1216 enjoys a bit of sack time at Kitsilano Shops, Vancouver, in 1947. Kitsilano performed most of BCER's car maintenance work.

1229 and train had to end their Burnaby Lake run at Sapperton, seen here, after the 1937 track abandonments in New Westminster; a bus transfer was thereafter required. This view was taken on August 8, 1943.

BCER's New Westminster Depot was a major structure in the Royal City, its train concourse usually quite busy. A large waiting room occupied the ground floor to the left of the concourse, while company offices were on upper floor. And right across the street was Canadian Pacific's venerable station. The view was taken in 1943.

Combine 1401 and train rest briefly on the Chilliwack loop before returning to Vancouver. It was June 17, 1949 when John Koschwanez snapped this pleasing scene.

car trains operated on three hour headways and running time from Victoria to Deep Bay was 75 minutes.

Unfortunately, traffic on the Saanich never came up to expectations and the new cars were returned to Vancouver in 1923 and rebuilt one-man interurbans, much smaller in size, were substituted. Even this economy proved ineffectual and the last car ran on October 31, 1924.

* * *

CARS

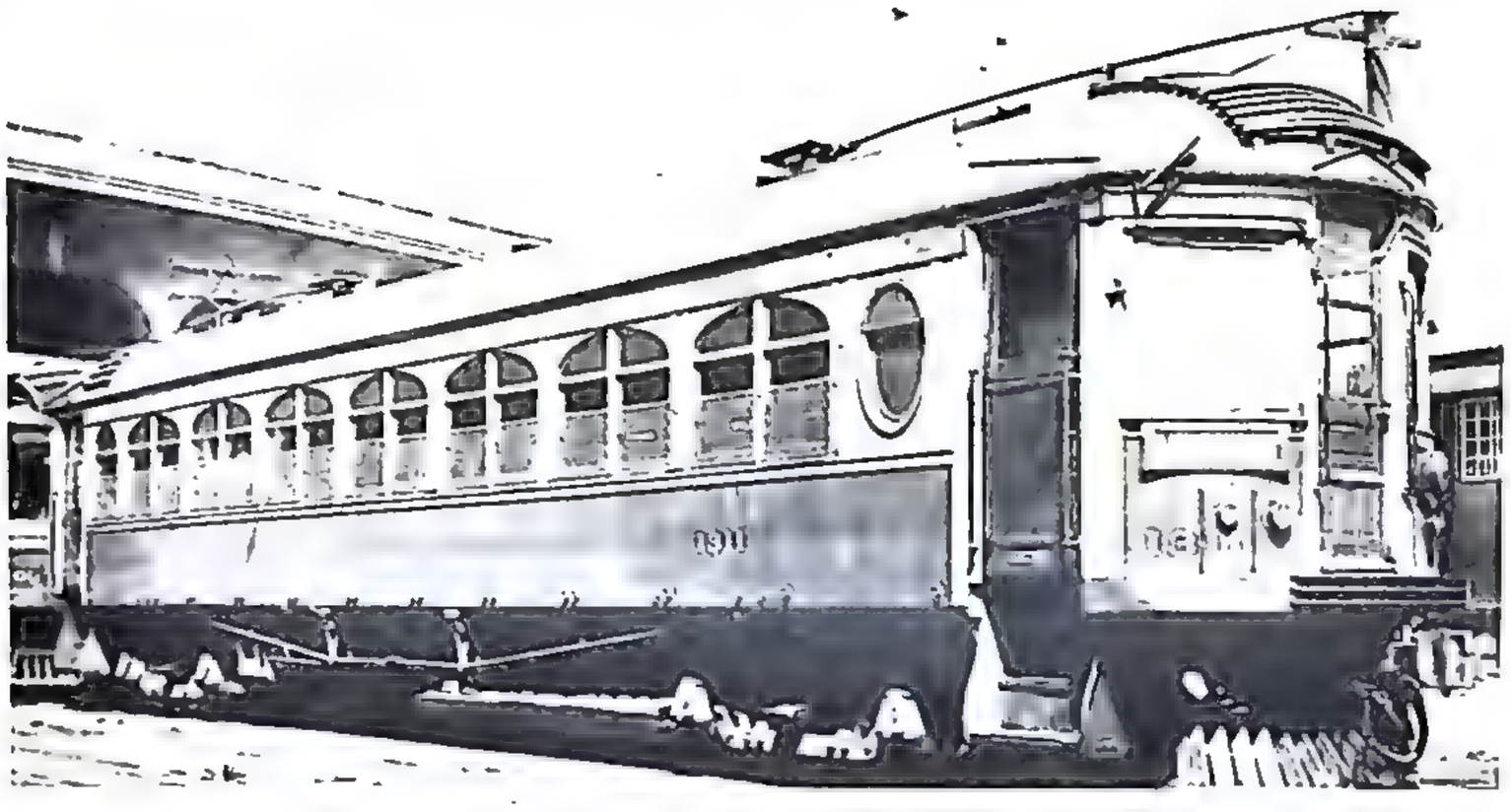
1000-1009: These ten light interurbans were built by Preston Car & Coach Company of Preston, Ont., in 1910. Their short, closed bodies were mounted on Brill trucks (27E2, except car 1001 which had a pair of 27MCB2), and motors were Westinghouse 112-B2 (cars 1000, 1004, 1006, 1007), Westinghouse 101D (cars 1005, 1008, 1009) or General Electric 57 (car 1002). Able to operate in trains only with each other, these cars were assigned to tripper service and/or school extras on Central Park line. During rush hours they usually bore the Highland Park sign. The series was broken in 1913 when car 1003 was destroyed by fire.

1011-1012: Built by BCER in its New Westminster Shops in 1911, these two cars were not too close copies of 1000-1009. Car 1011 had Westinghouse 101D2 motors; 1012 had GE 57 machines.

1200-1216: Here we have BCER's oldest interurbans. As originally built (1200 by Ottawa Car Company in 1899, the others by BCER 1903-1909) they were single unit cars with large wood pilots; all bore names ("Matsqui," "Richmond," etc.). These cars were rebuilt for MU operation and ran for many years on District Two. Of more than passing interest: some of these had single, nidividual windows while others had paired windows. Earlier cars in this class had Brill 27E2 trucks, but most were eventually mounted on Standard C-60s. GE 204A motors were standard, along with GE Type M control. Cars in this class averaged out at about 71,500 lbs.

1217-1244: BCER purchased these high, trim interurbans from St. Louis Car Company in 1913—its first and only steel interurban equipment. Ostensibly built for Stone & Webster for one of their properties, BCER succeeded to ownership when S&W reneged and BCER produced the cash. Originally all were similar, having four GE204A motors, GE Type M control, 60 seats and a weight of about 70,800 lbs.; the big cars were mounted on St. Louis Car's 23ES trucks.

Cars 1237-1244 were original equipment on the Saanich line. In 1932 these were somewhat rebuilt, receiving four Westinghouse 333C2 motors, HLF control and new numbers: 1313-1320; this equipment was removed from express cars 1701-1705, 1707-1709. These changes brought their weight up to 5,400 lbs. and enabled them to train with the heavy equipment used on the Chilliwack line. To accommodate the larger motors, 1313-1320 were given Standard C-60 trucks. After these changes were ac-



1311, one of four BCER arch roof interurban cars, rests at Kitsilano Shops in 1947. The big car is mounted on Standard C-60 trucks, much liked by BCER.

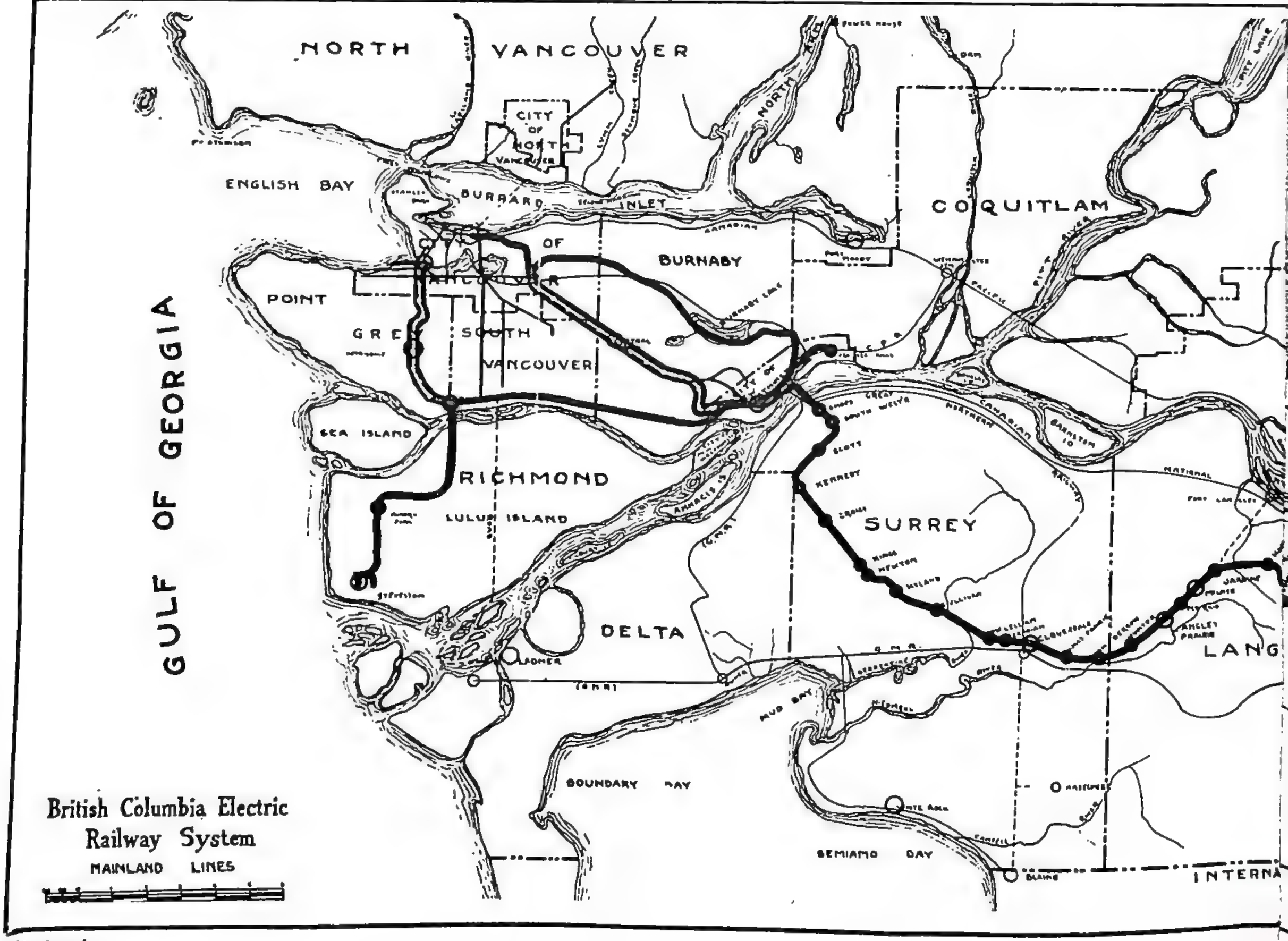
complished, 1313-1320 could MU with all the heavy interurban passenger equipment of the 1300-1400 Classes but, of course, could no longer train with their former classmates, 1217-1236.

1300: A 1910 product of American Car Company, St. Louis, this car was equally at home on Districts One and Three, although it saw most service on the Central Park line. As was the case with the other 1300s, this car had four Westinghouse 33C2 motors, HLF control and weight up in the 84,000 lb. bracket.

1301-1302: Also built in 1910 but by Ottawa Car Company were these twins, assigned to either Districts One or Three. Only outward difference: dissimilar trucks; 1301 had Brill MCB-3, while 1302 had Brill 27E3, an earlier model.

1303-1305: Built by BCER in its well equipped New Westminster Shops in 1911, this class was usually assigned to District Three, but also saw service on the Central Park line. Car 1304 was the standout, having been used as the private car of the Duke of Connaught when he visited Vancouver in 1912; in this service, the car was handsomely decorated and received plush interior appointments. 1304 suffered serious fire damage in 1945 and emerged after rebuilding with an arch roof, making it resemble 1309-1311. Interesting note: each of the three had a different type of truck applied: 1303 had Brill 27E3, 1304 rode on Brill 27MCB3, and 1305 got along with a pair of Standard C-60s.

1306-1308: Perhaps the most beautiful of all BCER interurbans were these three, built by Kuhlman Car Company in 1911. 1306 and 1308 had Brill 27E3 trucks, while 1307 was even more striking with its Brill 27MCB3 trucks. The

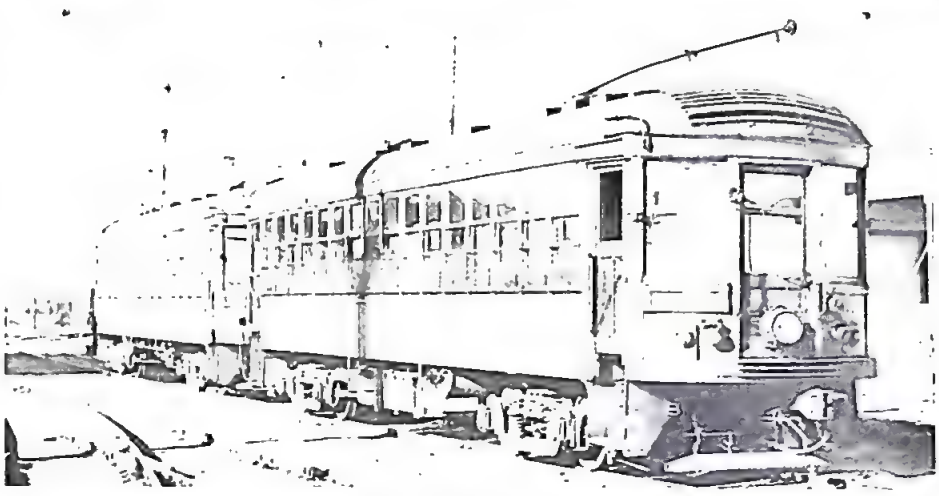


trio was quite similar to the heavy interurbans built for Oregon's Mt. Hood Railway out of Portland. 1306-1308 also divided their allegiance between Districts One and Three.

1309-1311: Here we have the last order of interurbans to have been turned out by the New Westminster Shops—the order filled in 1914. Set quite apart from the other interurbans by their arch roofs, 1309-1311 rode on Standard C-60 trucks. The handsome trio usually operated on District Three.

1312: The former car 1209 was rebuilt into a Railway Post Office car by BCER at an unknown date (possibly 1909) with the number 1500. Another RPO car, 1501, was especially built for this service. Their RPO service was short lived, however, and both cars returned to passenger use before 1914 as 1312 and 1216, respectively. 1312 had Standard C-60 trucks.

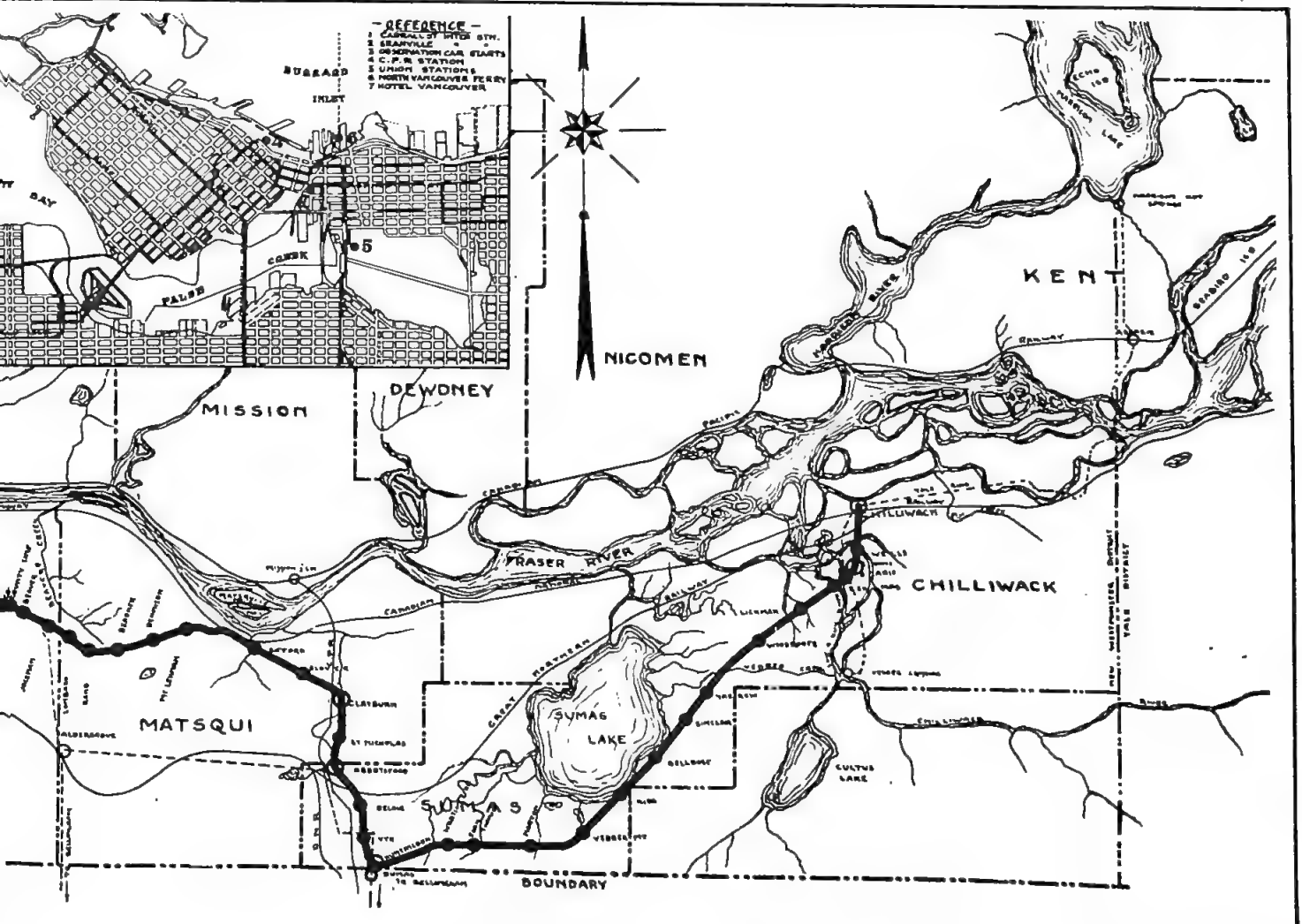
1400: BCER'S 1400 Class was its passenger-baggage combines. 1500, built by American in 1910 saw many years of service on the Chilliwack line until the great demand for additional passenger space in World War II caused it to be rebuilt into a straight passenger motor in 1942, at which time it was renumbered 1321. This car had Brill 27E3 trucks.



St. Looies 1225 and 1224 pose in 1947. This class had steel siding but wood elsewhere. Note that BCER equipped its lighter interurbans with streetcar-type life guards instead of pilots.

1401-1402: Ottawa Car Company built this duo in 1910 and they worked out their lives on the Chilliwack line. They were mounted on Brill 27MCB trucks.

1600-1603: These four trailers were used on Districts One and Three at peak traffic periods and were credited with getting Chilliwack trains over the line faster than if the same number of cars were all motors—this phenomenon due to limited power supply. The quartet began life as passenger motors of the 1200 Class, having been 1214,



Car 1312 (ex-1209) was upgraded to heavy interurban status by installation of larger motors. This 1944 view shows this paired-window at Carrall St. Station.

1200, 1210 and 1213, respectively. Indeed, 1601 was BCER's very first interurban, having been built in 1899 by Ottawa. They were converted into trailers circa 1909 at New Westminster. 1603 was motorized in 1942 and renumbered 1322.

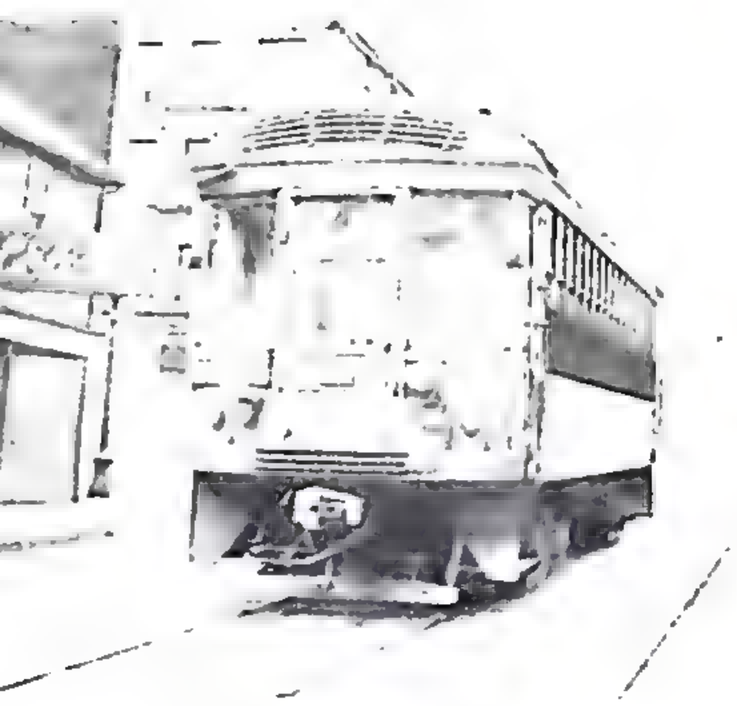
1700-1701: All of BCER's baggage-express motors were in its 1700 Class. 1700 and 1701, built by American in 1910, saw yeoman service on the Chilliwack line, usually being the lead cars on Fraser Valley trains. 1700 is credited with having been able to carry 600 ten-gallon cans of milk. 1700 had Brill 27MCB 3 trucks, while 1701 had Brill 27E3. 1701 was demotorized in 1932, its equipment going onto a St. Louis 1313 Class car.

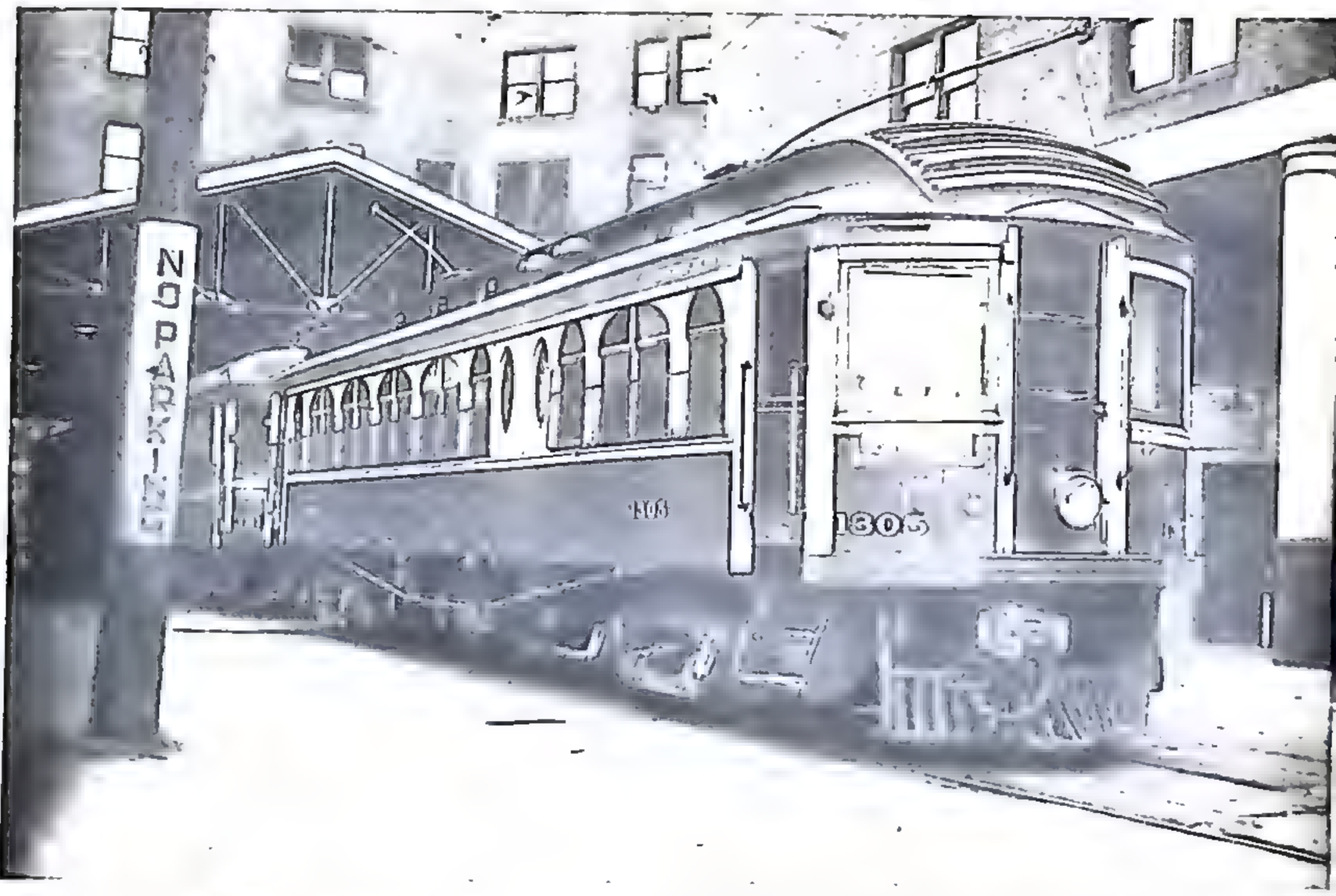
1702-1705: Built by BCER at New Westminster Shops in 1911, this class lost its motors and control equipment to the 1313 Class St. Louis in 1932 and thereafter saw use only as bunk cars, cook cars, etc., for track workers.

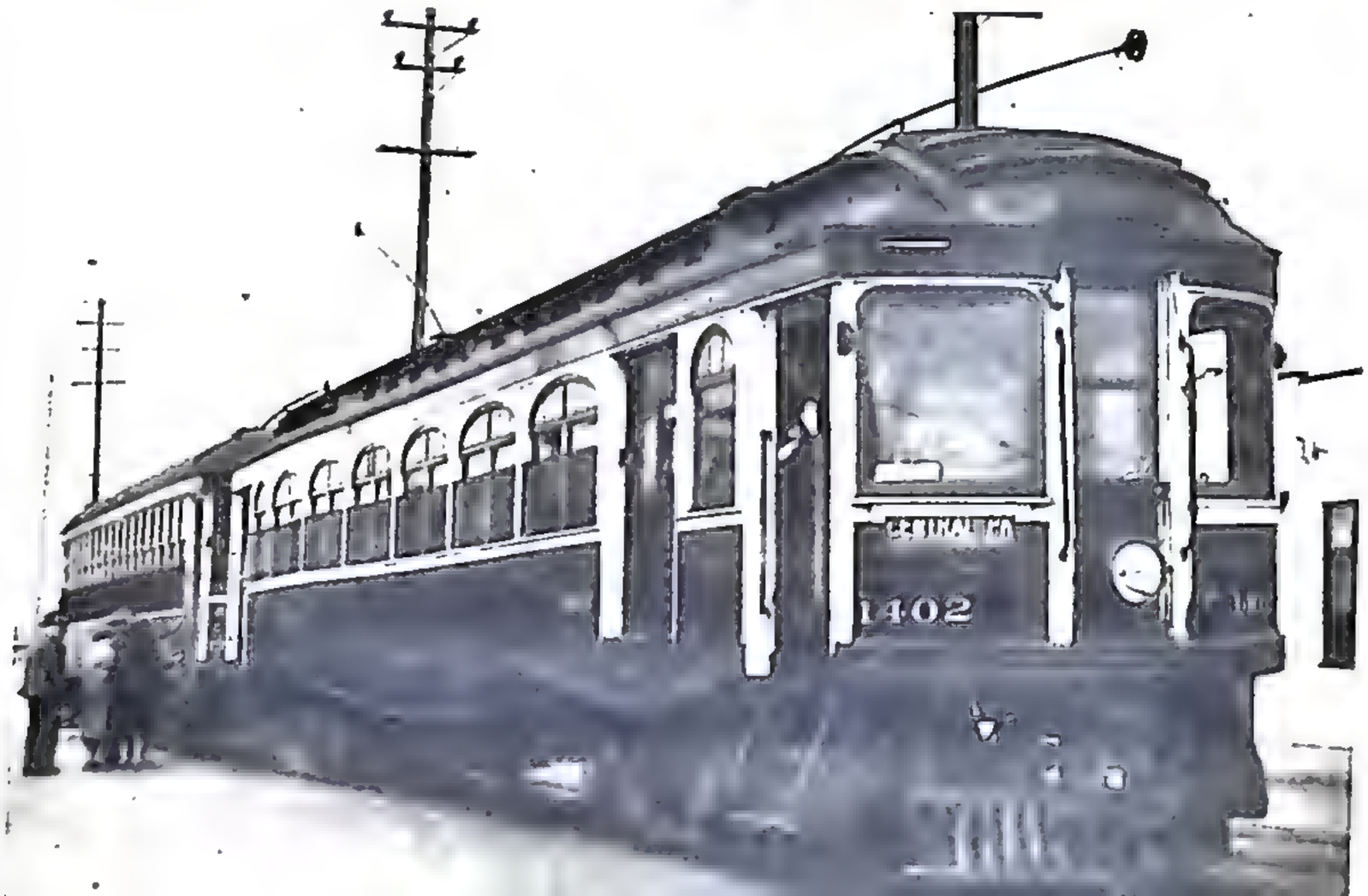
1706-1709: Niles Car Company was represented on the BCER roster by these cars, built in 1912 and 1913. 1706 was (with 1700) a mainstay on the Chilliwack line throughout its lifetime, but 1707 and 1708 lost their motors and controls to the 1313 Class in 1932 and were demoted to work car trailer status. 1709 remained a motor and was usually stationed at Chilliwack for use in an emergency. When these 1700 Class box motors were demotorized, they received trucks (St. Louis 23) from the 1313 Class.

The tiny yard at the rear of Vancouver's Carrall St. Station afforded little room for maneuvering. Central Park and Burnaby Lake trains changed ends quickly, but Chilliwack cars proceeded through to a larger yard some distance away for cleaning and storage.

BCER's Davie St. Station in Vancouver was little more than a shed, but it served well for many years. Here 1222, just arrived from Steveston and Marpole, is about to return on the thirty-minute headway prevalent on the line in 1943.







Combine 1402, impressive on its Brill MCB trucks, leads a St. Looie 1300 out of Vancouver in 1944.

GENERAL CAR NOTES

BCER entered the interurban field

Deep in the depths of World War 2, this pair of interurbans underwent some major maintenance at Kitsilano Shops. The month was September 1943, and 1321 and 1402 were soon back at work, transporting wartime thousands.

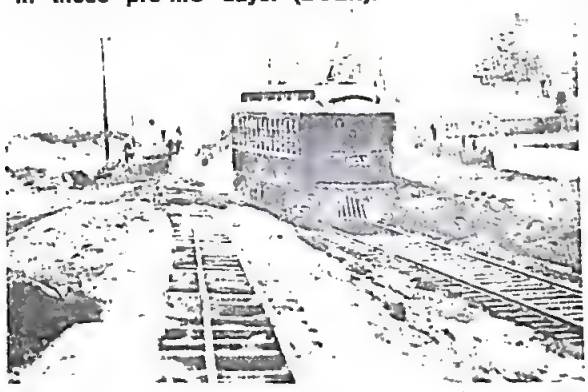
An inbound Central Park train, headed by 1316, passes the New Westminster Shops in 1944. Central Park service was then every twenty minutes with additional trains in peaks.

Arch roof and arch windows, yet! Comely 1311 leads a trailer and another motor along Commercial Drive at Broadway in this 1944 view by William C. Janssen.

ROSTER OF INTERURBANS, B.C.E.R.

Type	*Numbers*	*Builder*	*Date*	*Weight*	*Length*	*Width*	*Motors*	*Control*	*Scrapped*
A	1000-1009	Preston	1910	61,000	45′0″	8′9″	WH112	HL	1953 (1)
A	1011-1012	BCER	1911	60,000	43′0″		(2)	HL	(3)
B	1200-1216	BCER(4)	1903	71,000	50′0″	8′9″	GE 204A	M	(5)
B	1217-1236	St. Louis	1913	70,800	51′0″	8′7″	GE 204A	M	1953
B	1237-1244	St. Louis	1913	70,800	51′0″	8′7″	GE 204A	M	1953 (6)
C	1300	American	1910	84,000	55′0″	8′11″	WH333C2	HLF	1952
C	1301-1302	Ottawa	1910	81,000	55′0″	8′11″	WH333C2	HLF	1952-53
C	1303-1305	BCER	1911	85,000	55′0″	8′11″	WH333C2	HLF	1953
C	1306-1308	Kuhlman	1911	85,000	53′0″	8′11″	WH333C2	HLF	1952-53
C	1309-1311	BCER	1914	82,000	55′0″	8′11″	WH333C2	HLF	1953-54
B	1312(ex1209)	BCER	1906	75,000	50′0″	8′9″	WH333C2	HLF	1954
B	1313-1320	(See 1237-1244)							
C	1321	(ex-1400)							
B	1322	(ex-1603)							
D	1400	American	1910	82,000	55′0″	8′11″	WH333C2	HLF	1954
D	1401-1402	Ottawa	1910	81,000	55′0″	8′11″	WH333C2	HLF	1951
E	1500-1501	BCER	1906	75,000	50′0″	8′9″	WH333C2	HLF	1954
							GE 204A	M	
F	1600-1603	BCER(7)	1907	46,000	50′0″	8′9″	None	—	1951-52
G	1700-1701	American	1910	81,000	55′0″	8′11″	WH333C2	HLF	1950
G	1702-1703	BCER	1911	69,000	45′0″	8′9″	GE 204A	M	1950-52
G	1704-1705	BCER	1911	76,000	54′0″	8′11″	WH333C2	HLF	1952
G	1706-1709	Niles	1912	84,000	54′0″	8′11″	WH333C2	HLF	1950-52

It was just about the turn of the century when this 1200 passed grading crews somewhere on the Central Park line. Note heavy wooden pilot, standard in those pre-MU days. (BCER).



Notes:

Note (1): 1003 destroyed 1913.
Note (2): 1011 had WH 101D2 motor; 1012 had GE 57 motors.
Note (3): Probably scrapped 1954.
Note (4): 1200 built 1899 by Ottawa Car Company; became 1601..
Note (5): Scrapped between 1951 and 1954.
Note (6): Became 1313-1320.
Note (7): 1601 built by Ottawa, 1899.

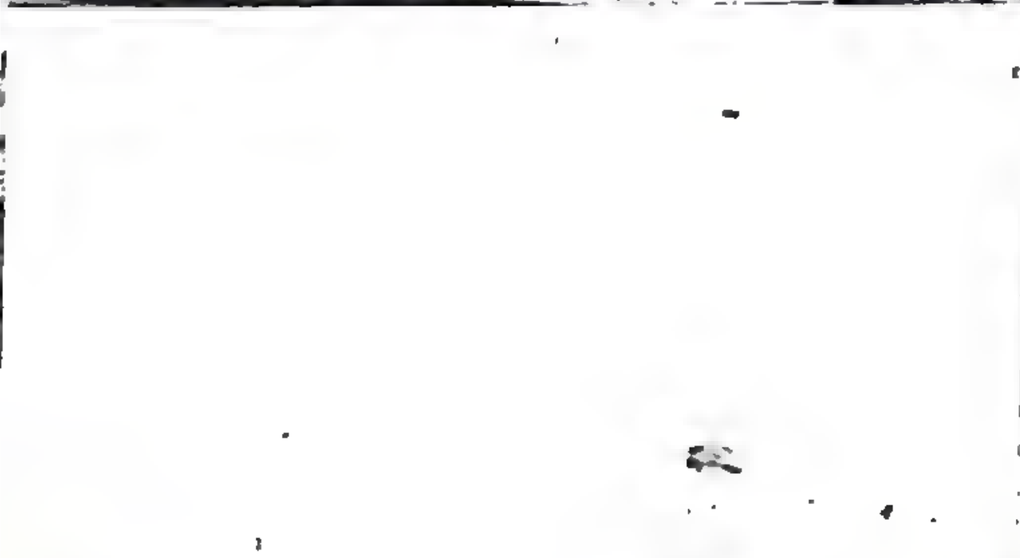
Car Types:

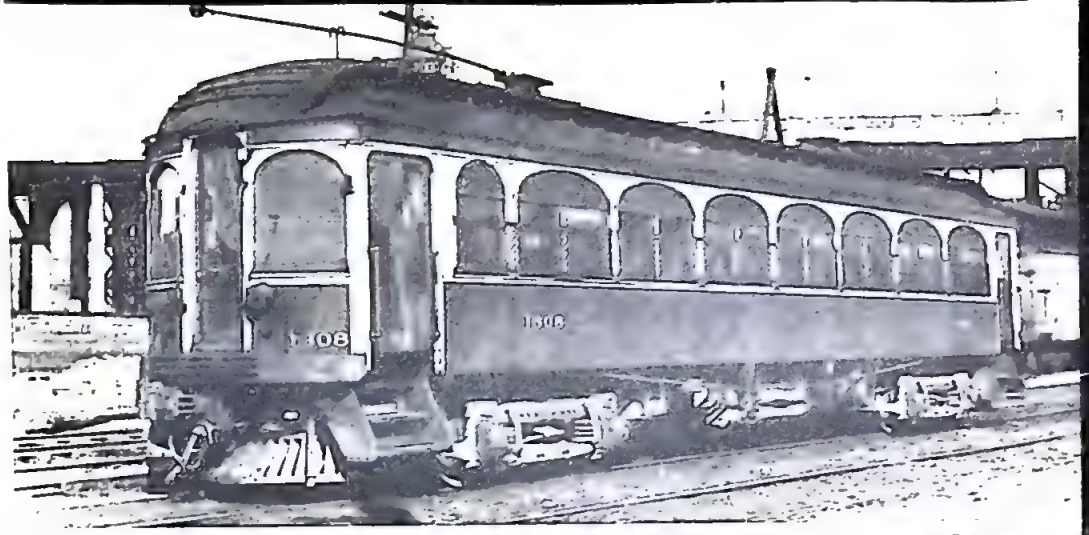
A: Wood & steel passenger interurbans, light.
B: Wood & steel passenger interurbans, medium.
C: Wood & steel passenger interurbans, heavy.
D: Wood & steel passenger-baggage combines, heavy.
E: Wood & steel Railway Post Office cars.
F: Wood & steel passenger trailers, light.
G: Baggage & express cars, heavy.

Combine 1401 rests briefly outside New Westminster Shops in 1944. Note strengthening steel under baggage compartment.

The Chilliwack station was built midway through the terminal loop, with umbrella sheds following the graceful arc of the two tracks. (W. C. Janssen photo).

The arrival of one of the three daily Chilliwack trains was an event in Fraser Valley communities. Here 1402 and train pick up speed after depositing some returning natives in 1943.





1308 was one of the Kuhlman trio (1306, 1307, 1308) which was widely held to be BCER's most attractive cars. Here mounted on Brill 27-E trucks, 1308 originally had Brill 27 MCBs.

In June, 1912, the newly appointed Governor General of Canada, the Duke of Connaught, made his first trip west. Car 1304 was decked out with regal trimmings (curtains, carpets, wash rooms) and the royal coat-of-arms. Here the resplendent car poses at New Westminster Shops with some of the men who transformed her. (BCER).

using the GE 57 motor (rated at 35 hp) as standard. As trains became longer and speed rose, it switched to the GE 204 motor of 75 hp. Still the demand for higher speed mounted, and BCER came to the final decision: to standardize on the Westinghouse 333 motor (100 hp). Some interesting upgrading of car classes resulted from this program: the Fraser Valley interurbans began with the GE 57 (cars 1300-1308) then went directly to the 333. The 1200s began with 57s, then went to the 204. Those 204 motors from the 1313 Class were kept as spares for other 1200s. The 57 motors were eventually sold as junk to Japan during depression years.

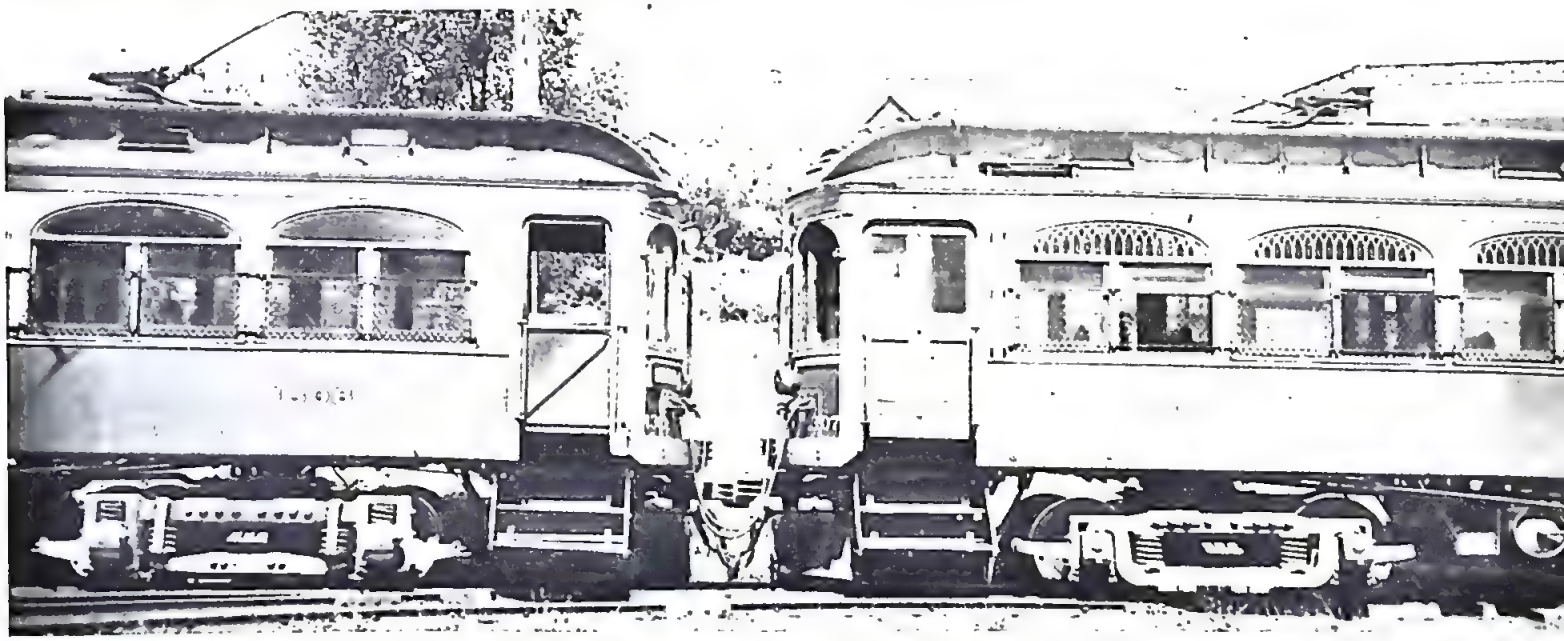
* * *

BCER regarded the 27MCB-3 truck as interchangeable with the 27-E3, and cars received such truck switches at various times. The St. Louis 23ES was also interchanged with the 27-E3. Even the Standard C-60 occasionally appeared under cars strange to it.

* * *

Preserved cars: 1220 (Seattle), 1223 (Sapperton), 1225 (Perris, Cal.), 1235 (Seattle), 1304 (Portland), and 1311 (Squamish).

Among the Kuhlmans there were differences—as witness upper sash and trucks. 1308 and 1307 pose at New Westminster Shops in 1944.



Get a Grip on

Travel

San Francisco has its ups and downs (you're kidding!) with its cable car system but they continue to draw patrons from around the world.

Pick the right street and you'll see cable cars as far as the eye can see, which is usually to only the top of the next hill. No less than five cars are in this shot.

They call it Baghdad by the Bay. Hordes of gold miners and sailors lost their fortunes there, Tony Bennett did the same with his heart, the best sourdough bread is reputed to come from there and clanking their way through swirling fog and hoping motorists get out of their way are the last vestiges of a great cable car empire, to the delight of intracity commuters and tourists, if not always the city fathers.

In their heyday, there were almost as many cable car operations as main streets and depending on the final destination, riders could hop on the Clay Street Hill Railroad, the Sutter Street Railway, the California Street Railroad, Geary Street Park and Ocean Railroad etc. etc., all early attempts to relive the population of the drudgery of traversing the notoriously steep hills, not to mention making a few bucks in the process.

And just because they were all known as cable operations, reminding the uninitiated to comment that Lionel's three-rail track had a prototype, did not mean the methods used to work the lines were the same. Indeed, there was the Hallidie bottom grip, the Hovey single-jaw side grip, the Eppelsheimer bottom grip, the Root single-jaw side grip, and on and on. Not to mention a complete non-standardization of gauges ranging anywhere from 3' 6" to 5 feet, with a variety in between.

The year 1869 marked the conception of the cable car principle in San Francisco when Andrew Hallidie began work on his Clay Street Hill Railroad. Built up from the bay side of Nob Hill from the fledging business community below, operations began four years later.

All of three thousand feet long, the

simple idea was soon picked up by other local entreprenuers. The second line was a converted horse car operation and took the name Sutter Street Railway which went from Presidio Avenue to a horse car connection which eventually got the patrons to the Ferry Building. An additional side line went up Larkin Street.

And, of course, despite the fact there were many streets to build prospective cable car operations on, competition started early. The California Street Cable Railroad built up from the business community to Nob Hill, only a few blocks away from the original Clay Street line, its principal backer being none other than Leland Stanford.

Time and better modes of transportation were not kind to the many cable car operations however, and as the 20th century progressed upward the number of individual companies went downward and in January, 1947, Mayor Roger Lapham, wanting to get rid of the antiquities, declared that his policies included dumping the remaining cars for, in this case the villain, buses.

Enter Frieda Klussmann and the CCSCC, the Citizens' Committee to Save the Cable Cars. The matter was put on the next ballot and lo and behold, the idea to dump the cable cars was defeated by a three-to-one majority. Oh yes, Mayor Lapham was replaced also.

Saving history is one thing, but the financial burden of the little cars was something else again and as the mid-50's rolled on, additional car track abandonments were ordered.

Today, the city's remaining track, slightly less than five miles, seems safe from further cutbacks, and in the ensuing years much of the orignal maintenance equipment has been replaced or updated. Finally, to insure their presence in the future, the cable cars were added to the growing list of National Historical Landmark's. ☆

Cable cars tend to pile up on both ends of the Powell and Mason Street line as they wait their turn on the table. Powered by armstrong of course.

Auto traffic is always a problem for the cable cars (although car drivers see the problem from the other way).

Have no fears about the cable cars going the way of the Dodo bird, they are now protected by the National Historical Landmarks.

THE NOON MILWAUKEE

TYPICAL OF TRAINS THAT SERVED ROUTES OF MODERATE LENGTH AND DECIDEDLY SECONDARY IMPORTANCE

By William D. Middleton Photos by the Author

Didn't all of us who fancied riding on the cars have some one train that was a special favorite? I'm not thinking about the kind of reverence we bestowed on the *Century*, or the *Panama*, or the other great trains of that sort, which was based on strict standards of excellence, but rather I have in mind the kind of attachment that was based entirely on sentiment and long familiarity. For most of us our special train was one that played a central role in our lives.

For me that train was the Milwaukee Road's *Varsity*.

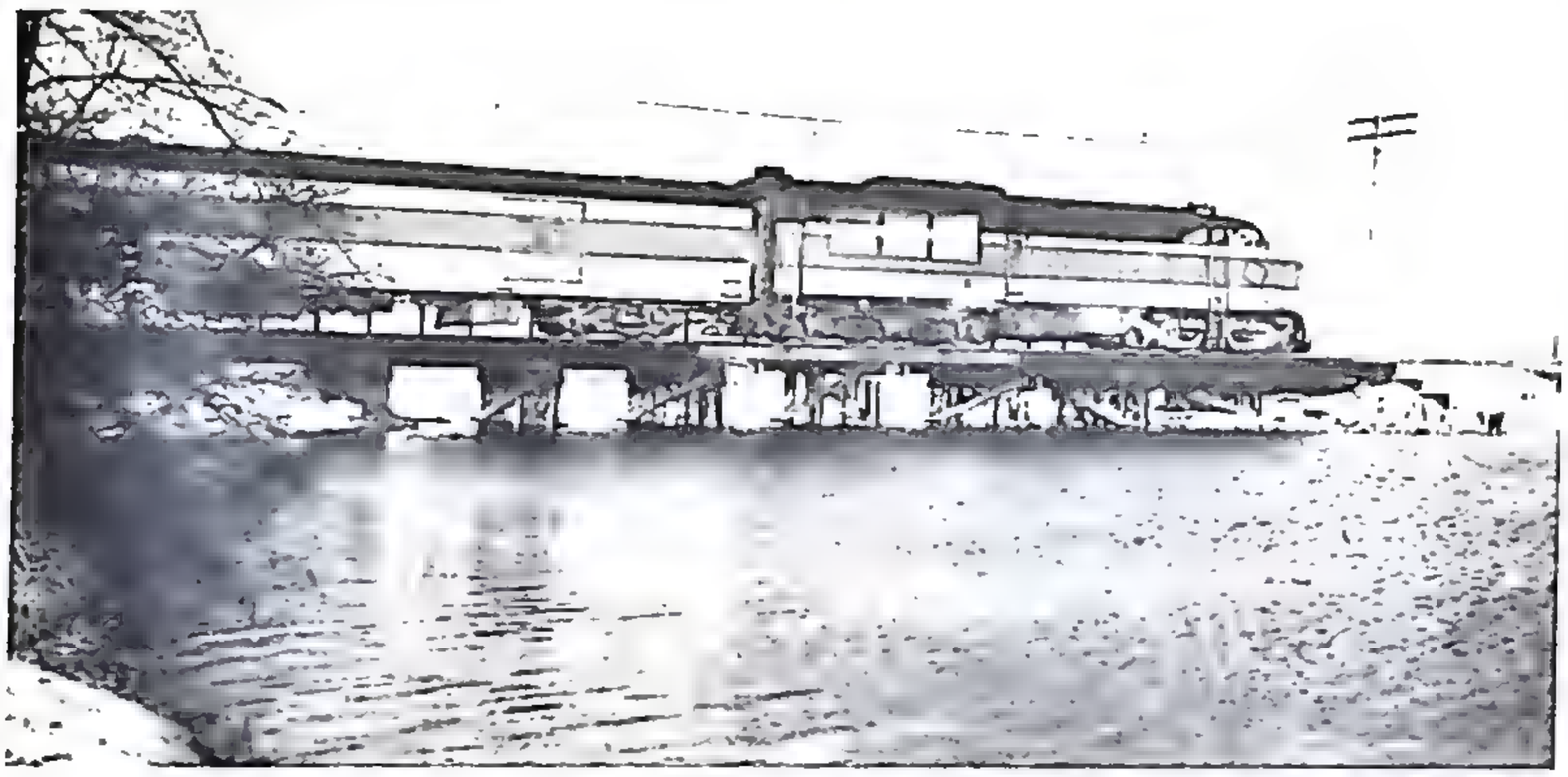
From April of 1927 until its demise in 1971 the *Varsity* operated over the Milwaukee's 140-mile route between Chicago and Madison, Wisconsin. It was perhaps typical of the better trains that served routes of moderate length and of decidedly secondary importance. Like such contemporaries as—for example—IC's *Delta Express*, SP's *Del Monte*, or GN's *Gopher* and *Badger*, the *Varsity's* reputation was, at best, regional.

The *Varsity* was never a particularly prepossessing train. In steam days the train normally ran behind one of the Milwaukee's venerable F-3 Pacifics. Although they were still spirited performers, the F-3s (Alco 1910) were hardly front rank power on a road that ran the likes of 120 mph Class A Atlantics and F-7 Hudsons.

When diesels came to the *Varsity* in the late 1940s they were most often drawn from the ranks of the Milwaukee's earliest (1941) Alco DL-109 or EMD E-6 passenger units, themselves displaced from main line *Hiawatha's* by newer power. Later, during the 1950s and beyond, the Milwaukee's post-war Fairbanks-Morse OP's, or

Running behind an EMD F unit, the Varsity consist is typical of most of the 1950s. Seen at MX Tower in Lake Monona the consist is RPO/Rwy. Ex., combine, coach and cafe/parlor car.

1955 saw the "Varsity" running behind a Fairbanks-Morse Erie built A unit.



Author Middleton braved the cold Wisconsin winter to capture the "Varsity" being propelled by the rather rare, and now just a memory, Alco DL-109.

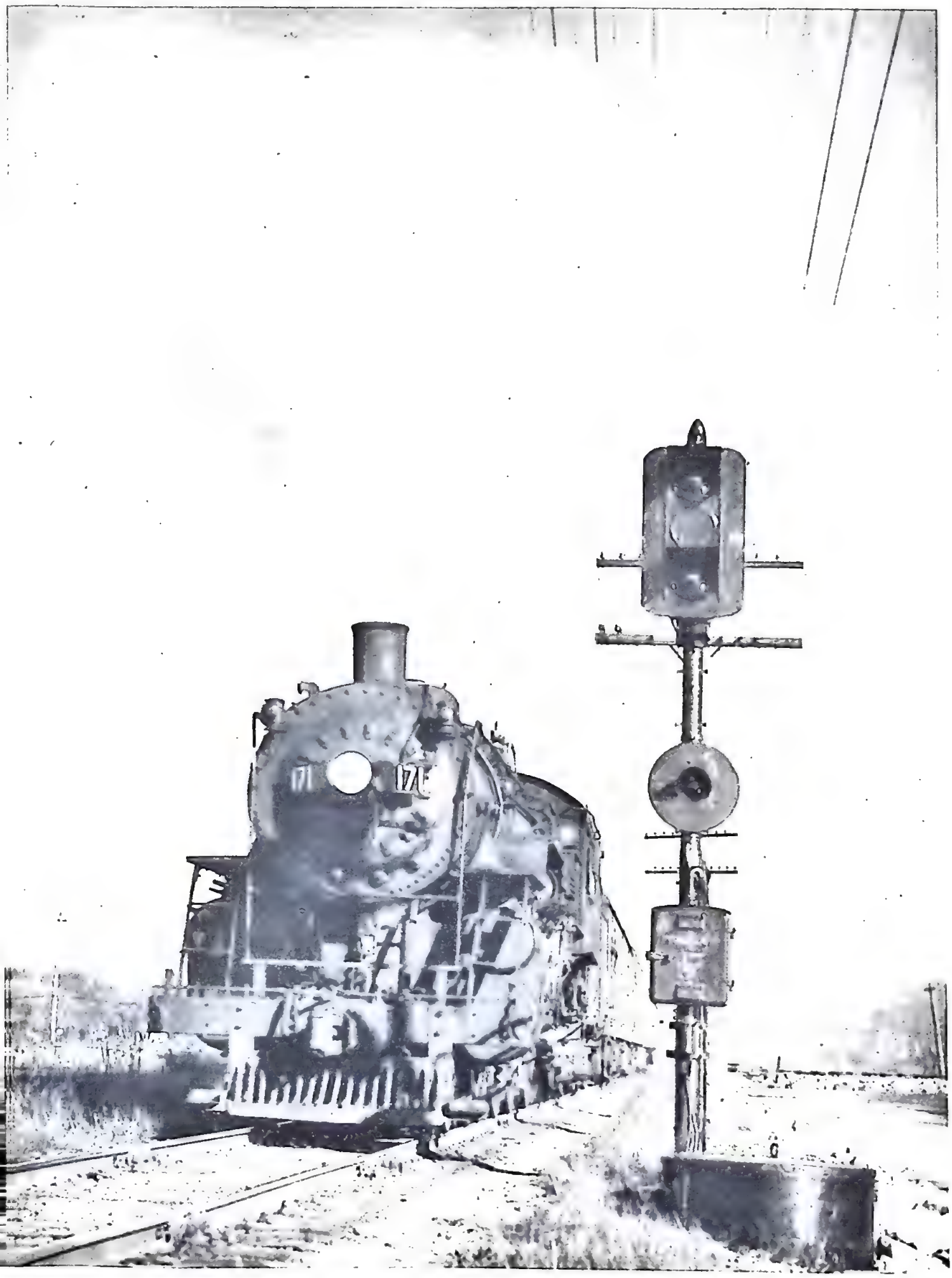
passenger-equipped EMD F units, often drew the *Varsity* assignment.

Like its motive power, the *Varsity's* rolling stock was usually handed down from the main line trains. From the 1940s on, the train's consist usually afforded a sampling of the Milwaukee's several earliest generations of *Hiawatha* equipment. Typically, there was a combination car up front to handle the RPO-express-baggage traffic, perhaps a car of storage mail, generally no more than two coaches, and the *Varsity's* own special cafe-parlor car bringing up the rear.

At holiday periods there were always extra cars, and on such occasions as a Wisconsin home game, particularly against Northwestern or Illinois, the morning *Varsity* from Chicago would carry as many as 18 or 20 extra cars of football fans that would be switched right out to Camp Randall Stadium, and then returned to Chicago on the southbound *Varsity* in the afternoon.

My long association with the *Varsity* began in 1947, when our family moved into a white frame house overlooking Lake Monona and the Milwaukee tracks at Madison. The northbound *Varsity*—train #117 in the timetable—arrived in Madison right around noon, and listening for the familiar whistle at the edge of town, and then watching for the string of red and orange (until they became UP yellow in the mid-1950s) cars to come gliding across Lake Monona toward the West Washington Avenue depot, was a lunchtime ritual. To us it was never "117" or the *Varsity* but simply the "Noon Milwau-

Train No. 20, the "Varsity" (then a morning schedule) crosses Lake Monona with a Pacific No. 171, an F-3, pulling the various coaches and a parlor car.



Christmas Day, 1948, and the "Varsity" is powered by an ETA. No. 17B as train 117 arrives from Chicago. The train is passing MX Tower at the mid-Lake Monona crossing of the Milwaukee and the C&NW.

Alco DL-109 diesel No. 14B, one of two units purchased in 19 for Milwaukee Road's "Hiawatha," arrives at Madison in 1948.

...see ... and all you ever had to do was ... be on the Noon Milwaukee ... and the family knew just what you meant.

The southbound *Varsity*—No. 118—was no less a fixture. It was always scheduled out of Madison around 5:30 or 6 p.m., and the spirited way the train came booming out across the lake, honking impatiently at the fishermen roosting on the trestle, always helped to enliven the highball hour as the family relaxed on the front porch before dinner on summer afternoons.

During nearly a quarter century the paths of my life and that of the *Varsity* were interwoven. During those years I came and went from Madison many times and in many ways, but as often as any other my journey began or ended on the *Varsity*. Scheduled out of Chicago's Union Station around nine or nine-thirty in the morning, it was almost always the best connection you could make from anything arriving in the morning from the east, south, or west, and I rode it on the last leg of

countless journeys home.

Boarding was never the rush that characterized the big main line trains; you always knew there'd be plenty of seats ("Madison?—to your left. Local passengers to the right."). If you'd slept late on the *Capitol* or the *Pacemaker*, and hadn't had time to breakfast at Fred Harvey's in Union Station, a late breakfast in the cafe-parlor, with the inevitable Milwaukee Road rose on each table, was one of the journey's special pleasures. The cook and waiter that ran the little dining section served up as good an order of hot cakes and sausage as I can remember having, the coffee was hot and plentiful, and business was never so heavy that you couldn't linger long over your breakfast.

The run up the main line to Rondout was always made at a good clip, but the further you got from Chicago the slower *Varsity* ran. There was always a stop at Fox Lake—the end of suburban territory—and then the train went rolling across the gentle, rich hills of

September 1948 saw an EMD E6A pulling the short but friendly train.

the southern Wisconsin countryside, pausing at places like Walworth and Avalon, where perhaps a post office truck and a relative or two waited expectantly beside the track.

Janesville was the biggest place along the *Varsity's* route, and the train always seemed to spend a little more time there while the crew handled the head end business. Beyond Janesville my impatience always seemed to grow as the stops became more frequent—Edgerton, Stoughton, and then McFarland—and finally we were almost in Madison.

For about a year, until they were sold to the Canadian National in 1964, a super dome car operated on the Varsity, in place of the cafe/parlor equipment.

There was a quickening sense of anticipation as I watched for Lake Waubesa and the County Fairgrounds on the left. Then the diesel honked for the Lakeside crossing and moments later the train was out on the long Lake Monona fill. To the right the state capitol dome loomed above the lake as the wheels pounded rythmically across the diamond at the mid-lake crossing with the Northwestern. Then the coaches slid in between the A. J. Sweet produce house and the Findorff lumber yard on the far side of the lake, past the coal yard and the creamery, and at last into the yellow brick depot on West Washington. I'd look down from the vestibule and see the folks waiting on the platform and I knew I was home once again.

The *Varsity* expired from much the same causes as did its contemporaries elsewhere in North America. After the Illinois Turnpike and I-90 went all the way you could drive to Chicago in less time than it took the train. And even if you didn't drive there were express Greyhounds almost every hour, and two airlines could get you from Madison to O'Hare in less than an hour.

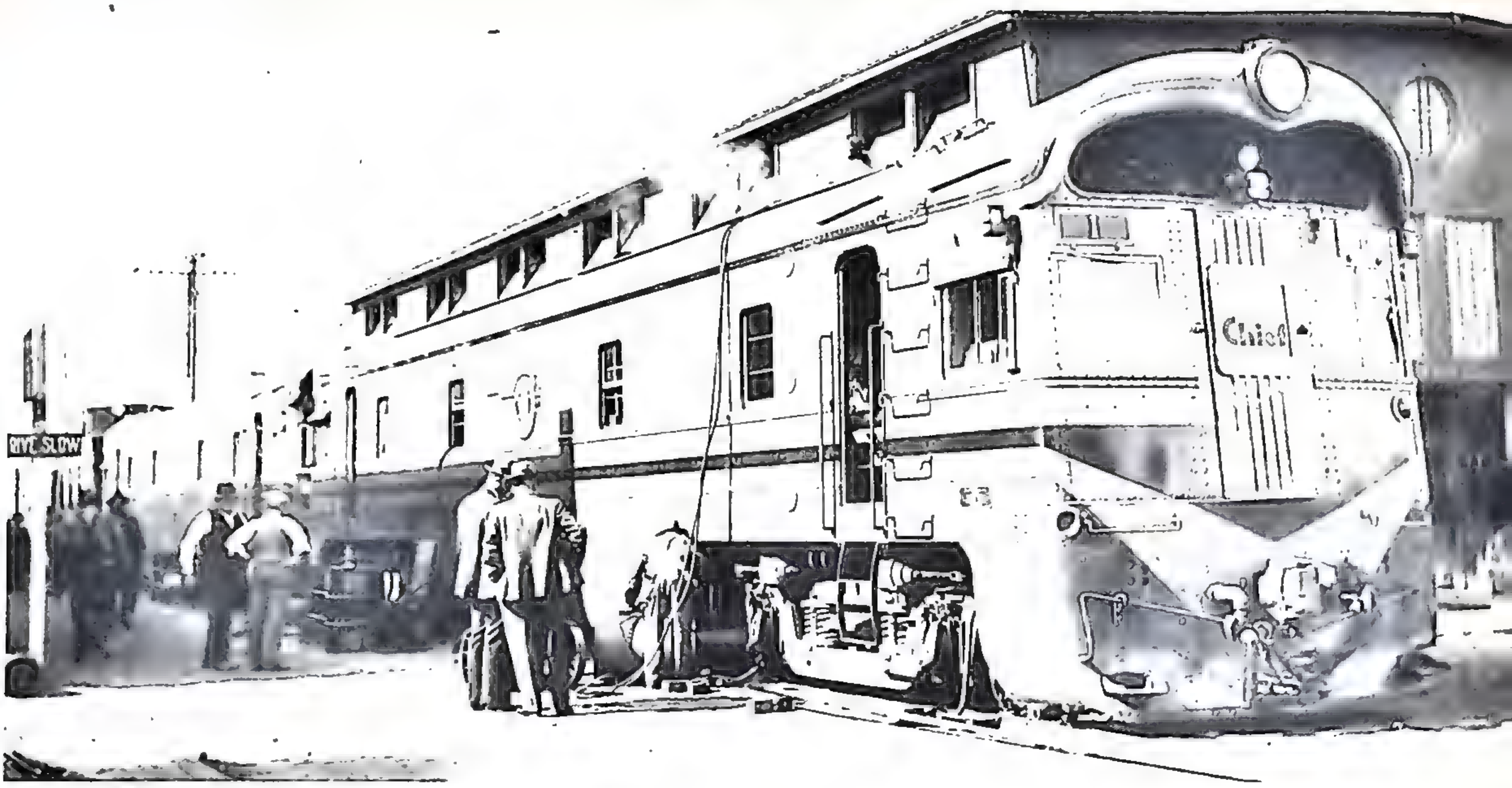
By the end of the 1950s Nos. 117-

118 had begun their inevitable decline. Parlor car service ended in 1963. For a season cafe-lounge service was continued with one of the Milwaukee's Super Dome cars—displaced from the abandoned *Olympian Hiawatha*—and then for a few months more with a regular cafe-lounge, but after April 1965 the train carried only coaches.

In 1967, the Post Office Department withdrew the *Varsity's* RPO contract, and the Milwaukee promptly filed for abandonment. There were hearings and then the ICC finally said the train must continue to run on weekends and holidays, and thus the *Varsity* lingered on for a few more years. But finally, with the arrival of the Amtrak era on May 1, 1971, the *Varsity* was allowed to end its now empty journeys.

My train—the Noon Milwaukee—is gone now, and going home will never be quite the same again.

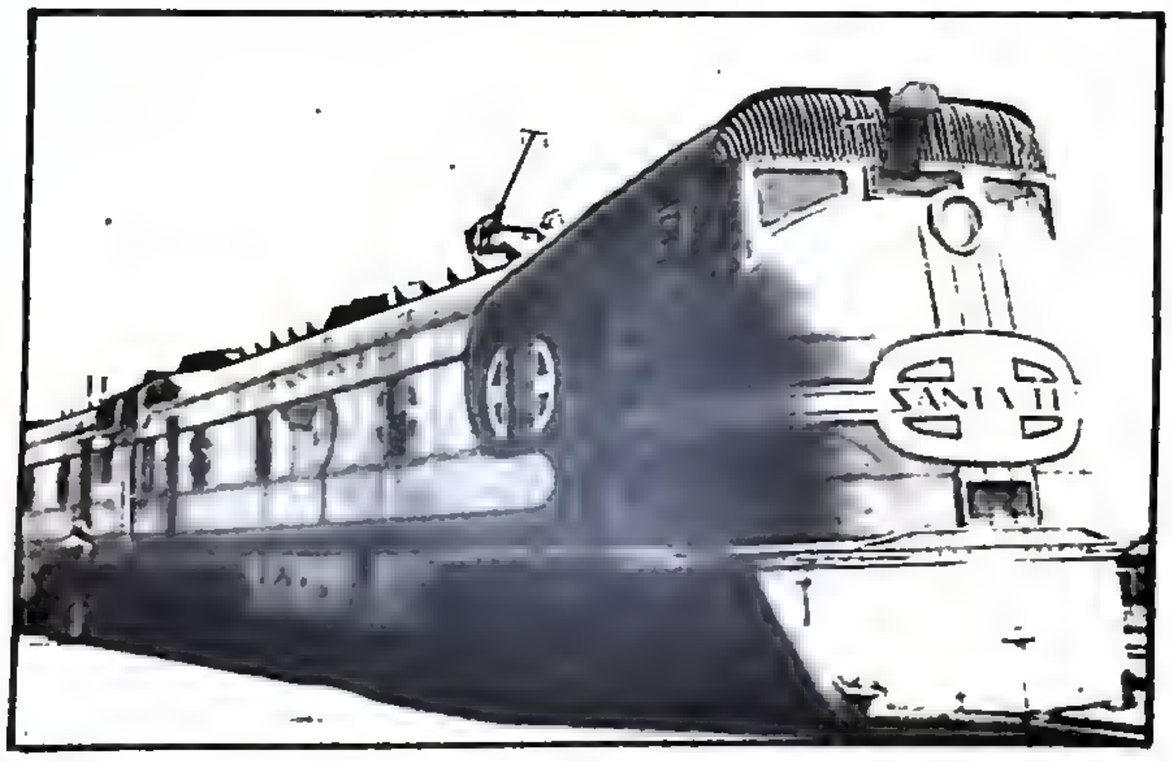
Near the end of its days, the "Varsity" in the early '70s operated Fri-Sat-Sun and Holidays only, and carried only coaches. Operation ended when Amtrak took over passenger service in May of 1971.



Nine months before the inaugural run of the Super Chief, brand new EMD boxcabs #1 and #1A get a thorough going over at Los Angeles, September 13, 1935. A dynomometer car is the third 'unit.' Gary Dolzall collection.

Built in 1936, the two unit #9006A/B bore "Silver King" and "Silver Queen" respectively on their flanks. The train is the General Pershing Zephyr, the location Bush, Colorado. All the Q shovel noses are scrapped. Gary Dolzall collection.

Grandfather of all E units, B&O #51 speeds the Royal Blue through Pennington, New Jersey, May 28, 1937. The EA plus companion EB formed a 3600 horsepower locomotive. Gary Dolzall collection.



Santa Fe #1 and #1A after rebuilding at Streator, Illinois in 1942. The bulldog snouted unit was scrapped in the early 50s.

A matched trio of E4s power Seaboard Air Line's ther·great train, the Orange Blossom Special on its way south to Florida. Gary Dolzall collection.

adequately that all five locomotives were under construction almost simultaneously. E-M's duo and B&O #50 took shape at G.E.'s Erie, Pennsylvania plant, Santa Fe #1-1A at St. Louis Car. Each rode a B-B truck arrangement and derived their singular 1800hp punch from a pair of Winton 201A V12s.

Of all the components integrated into the "Boxcars" their greatest asset was simple; standard couplers on both ends. They could and did couple to steel Pullmans as easily as lightweight equipment. The "Boxcars" received perhaps their greatest compliment when olive green #511-512 lugged the all steel *Capitol Limited* into Chicago on time. With the battle against Sand Patch behind, #511-512 ventured into Grand Central Station under the watchful eye of B&O Motive Power Chief George H. Emerson. The cantankerous Emerson, not known to throw around unwarranted praise, responded by calling Dilworth's creations "the pullingest animals on rails."

Emerson's enthusiasm went beyond words, B&O #50 entered service on August 22, 1935 heading the plush New York-Washington *Royal Blue*. Santa Fe's 3600hp duo were the final set completed, their introduction to service, and the birth of a famous train, would come in 1936.

As the days of 1935 grew short and snow signaled winter's arrival the Burlington fielded their last 600hp Zephyr; #9903, *The Mark Twain Zephyr* whisked her passengers between St. Louis and Burlington, Iowa.

With 1936 came a flurry of customized lightweight diesel streamliners. Union Pacific M-10002, constructed by Pullman-Standard went to work shining western rails as the *City of Los Angeles*. Similar in appearance to her earlier U.P. sisters, M-10002 consisted of a 120hp "cab" assisted by a 900hp booster.

April 1936: Seaboard Air Line and a twist on the past. Take a Zephyrish nose, add a rail car body complete with baggage compartment, then add a GM-Winton 600hp diesel. That's what St. Louis Car, under Electro-Motive contract, did in constructing SAL #2027 and #2028. While the Seaboard's duo are not likely to go down in history as innovative locomotives, they performed their local passenger duties well. So well in fact that #2028 lived to become Seaboard Coast Line #4900, operating into the 70s—something none of the more glamorous Zephyrs or Ms could boast.

Next entrant in the diesel derby: Illinois Central. Her number was 121, her name: *Green Diamond*. Like UP's M-series, #121 was born at Pullman-Standard and, indeed, she bore a striking resemblance to the yellow speed merchants of the west. The *Green Diamond's* creation, the public stir she created, her accomplishments were unique—yet her story is representative—it typifies the day and fervor when passenger diesels were synonymous with glamor, record speeds, and progress.

A few facts: #121 consisted of five articulated cars formed from aluminum and Con-Ten steel. Her 330 feet of length weighed in at 230 tons, and cost $425,000 dollars. The name, was selected by I. C. president L. A. Downs. Diamond: based on her steam powered predecessors, *Green Diamond*; to typify quality. Designed by the General Motors Art Department, #121's power came from a Winton 1200hp V16. Construction began in late 1935, General Electric supplied the electrical gear and Vapor Car Heating Co. provided a steam generator capable of 800 pounds per hour.

The Green Diamond, of course, was green—from trucks to exhaust stacks. Cypress green covered her front then swept down, under the window sills and ran the length of the consist. A lighter Crede green adorned the upper half of the train, stripes of silver and scarlet further enhanced her beauty. Lettering was silver, and a polished aluminum plate proclaiming "Illinois Central" rode on her side. The 59-foot power car wore aluminum stripes on her pilot, was led by an aluminum cast grille, and had styled aluminum framed windows. The second car carried baggage and mail, then came two 64-foot coaches. Inside the coaches wore shades of blue. The first seated 56, the second 44, plus four dining tables seating 16. Bringing up the rear was a round end observation. Inside was a kitchen and lounge plus dining for eight more. The observation's interior, like the exterior, was green and it, plus the coaches, carried radios.

Illinois Central's new racehorse made her first test run on March 30, 1936, a Chicago to St. Louis jaunt.

Where Are They Now?

When Electro-Motive outshopped the last E unit ten years ago an era of production ended, but by no means is the Electro-Motive streamlined passenger story concluded.

A good percentage of E-M's power remains operational in the case of latter models, retired to museums in earlier cases. The first diesel streamliner, fabled CB&Q #9900, rests securely outside Chicago's Museum of Science and Industry. Zephyr mates #9903 and #9908 also remain. #9903 at Mt. Pleasant, Iowa. #9908 in the company of many famous diesels in the St. Louis Museum of Tranport. Seemingly never to be outdone by her western look-alikes, B&M/MEC #6000 is preserved for public view on the Massachusetts property of the Edaville Railroad.

Unfortunately none of Union Pacific's M-series survived but such is not the case of two B&O landmark locomotives. Dilworth Boxcar #50 resides in St. Louis Museum of Transport and the carbody of the first E unit—B&O EA #51—welcomes visitors in Baltimore & Ohio's Railroad Museum in Baltimore.

Models E1, E2, E3 and E4 are extinct, luckily that is not the fate of CB&Q #9952A. This last E5 resides in the Illinois Railway Museum located at Union, Illinois. Four E6As remain, one, RI #630 is still shuffling commuters between Joliet and Chicago. The "Rock" is a road to watch. E6, E7, E8, and ex-UP E9s remain active on the RI. In addition, a SCL E6A is privately owned, IC E6A #4001 is stored at Paducah, Ky. and L&N E6A #770 gleams in Louisville's Railway Museum.

A handful of E7s still exhibit their sleek lines. AMTRAK purchased none but RI and PC still operate a few.

E8s and E9s represent the vast majority of active E units. Erie-Lackawanna is well known for freight operations with their E8s, included among the actives is ex EMD demonstrator #810. Penn Central, Milwaukee, C&NW and Southern Railway are among others still using late Es regularly. Southern's deserve special mention, done up in emerald green, white, and gold. SR's E8s continue to hold the point of *The Crescent Limited*.

Burlington Northern recently had a number of E8s and E9s rebuilt by Morrison-Knuedsen featuring 645 components. These commuter engines carry #9900 and up and are like new.

Amtrak owns about 200 E8s and E9s, some of these have been rebuilt to like new conditions as well at shops like ICG's Paducah facility and Milwaukee's hometown shops.

Two of Canadian Pacific's three E8As are healthy today. Now decked out in the brightly striped CP Rail image, #1800 and #1802 are active. #1801 was a wreck victim.

Already several late Es have been preserved. Wabash E8A #1009 glimmers in the Roanoke (Va.) Transportation Museum, and Espee E9A #6051 is preserved in Sacramento, California. Finally, there are those late lightweights, the *Aerotrains*. Despite a lack of in-service popularity, they have fared well. Rock Island #2 is a member of the diesel collection of the St. Louis Museum of Transport. RI #3 resis in the Green Bay, Wisconsin National Railroad Museum.

Chicago is, quite naturally, the place to catch E units. RI, BN, C&NW, EL, MILW, and Amtrak Es are available to watch, photograph and admire in the Windy City.

The next day, March 31st, #121 began a 7,500 mile odyssey. During April and the first two weeks of May, the *Green Diamond* would visit mid-America. Memphis, Tulsa, Houston, Dallas, Paducah, Milwaukee, Des Moines, all these and many others welcomed #121. 20,000 people visited the new diesel in Shreveport, Louisiana on April 5th. Another 18,600 turned out in Evansville, Indiana on April 20th. In all, 414,079 people looked at, walked through, admired and discussed #121 on her exhibition tour.

May 14th found #121 on her last preliminary run. Returning to Chicago from Springfield, IC's star attraction touched 111 mph to show her speed.

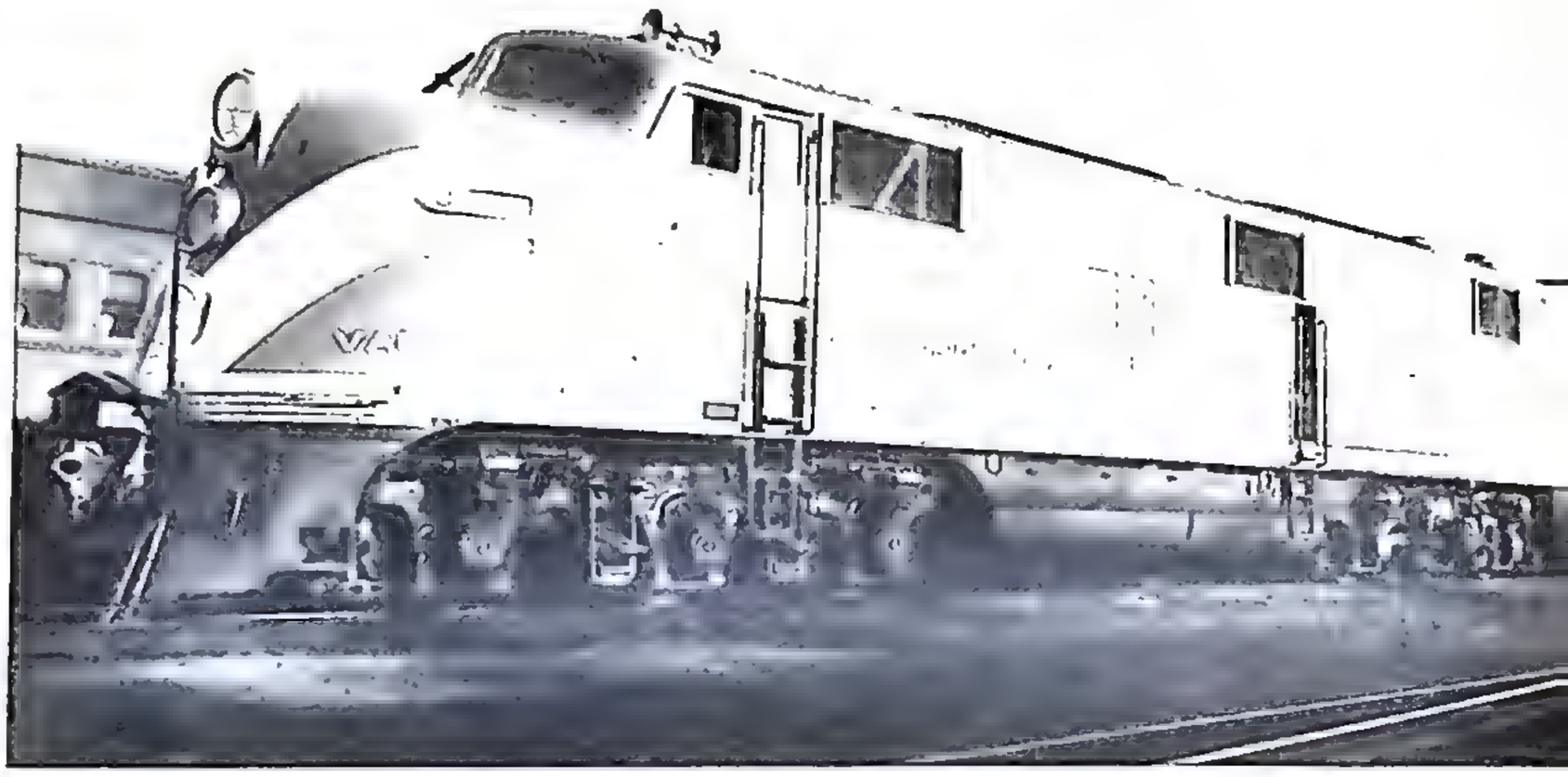
The streamliner was formally christened at 5:45 p.m. on May 17, 1936. On hand were such notables as IC president Downs, G.M. Vice-President Charles Franklin Kettering, and W. Averial Harriman, member of the board of Union Pacific as well as IC. The ceremonies were broadcast nationally over NBC radio, as #121 slipped from Central Station and raced for St. Louis. Another broadcast, originating on the streamliner, was beamed throughout the midwest and west.

With the "pleasantries" behind, #121 began her regular schedule. Chicago-St. Louis in 4 hours, 55 minutes. *The Green Diamond* departed St. Louis each morning at 8:55, by 1:50 in the afternoon she would pull into Chicago. After servicing, a Central Station 5:00 p.m. departure, and a race with dusk, the day's work ended back in St. Louis at 9:55 p.m. Such was the life of a 1936 streamliner.

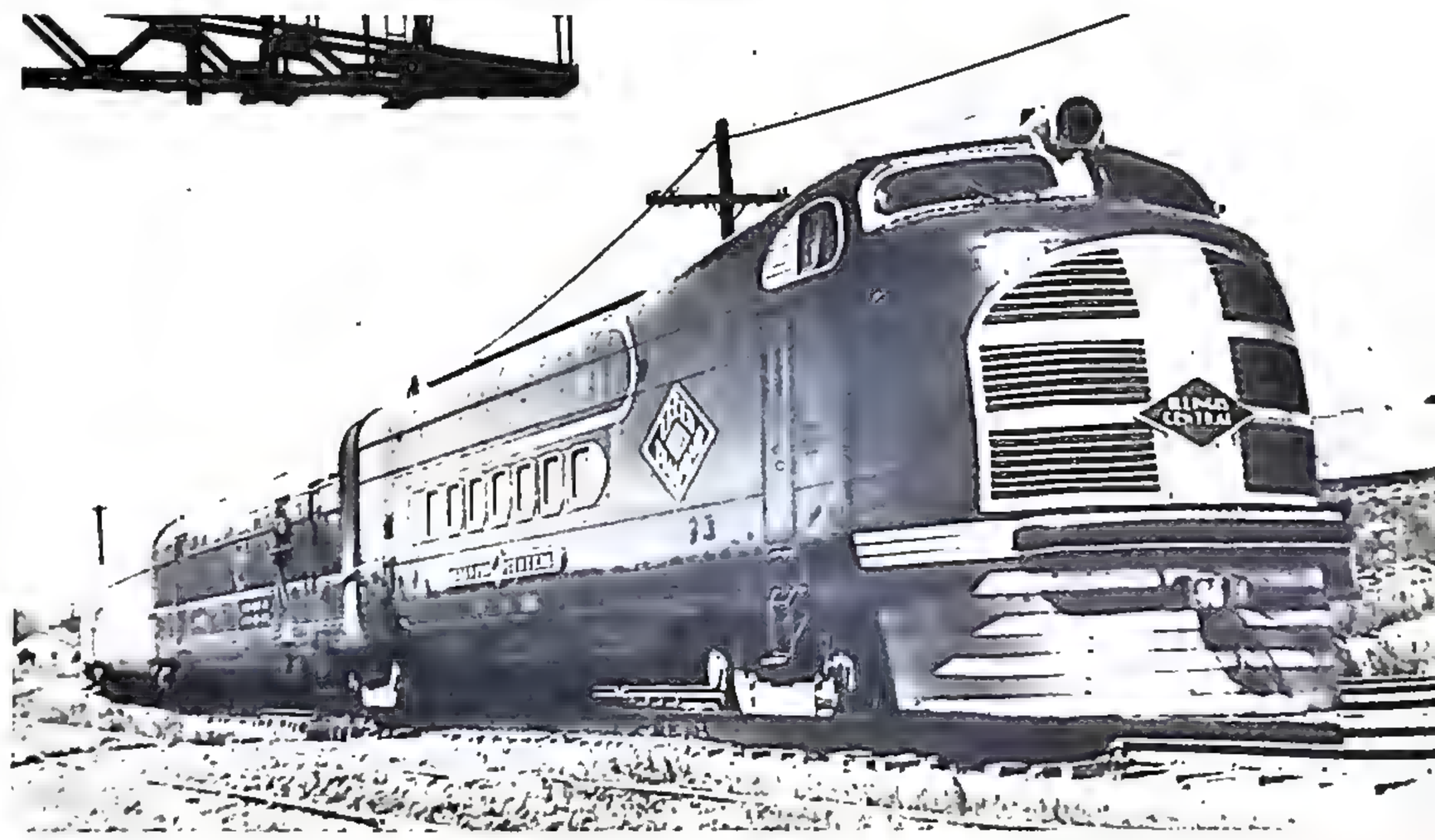
The *Green Diamond* was certainly not the only big news of May, 1936. Electro-Motive and the Santa Fe also combined to make May a truly significant month. May 20th was a banner day in Electro-Motive history as the LaGrange plant completed their first locomotive, Santa Fe switcher #2301. Road power would slip from LaGrange's fresh buildings later in the year, but in the fifth month of '36 the big road power story, in addition to #121, again revolved around "Dilworth's Boxcars." Eight days before their #2301 made news, Santa Fe inaugurated a new train, a great train—*The Super Chief.* Heading up this heavyweight first addition of the Super was, what else: boxcars #1-1A. With 9 months of testing behind, the 3600hp tandem first bore Santa Fe's new flagship on May 12th, and cut 15-hours off Chicago-Los Angeles steam schedules.

The story of 1936 would remain in the west, and end there, with "oldhats" at the streamliner game Burlington and Union Pacific. Late in the year Burlington re-equipped its *Twin Zephyr* service with 900hp Zephyrs #9904 and

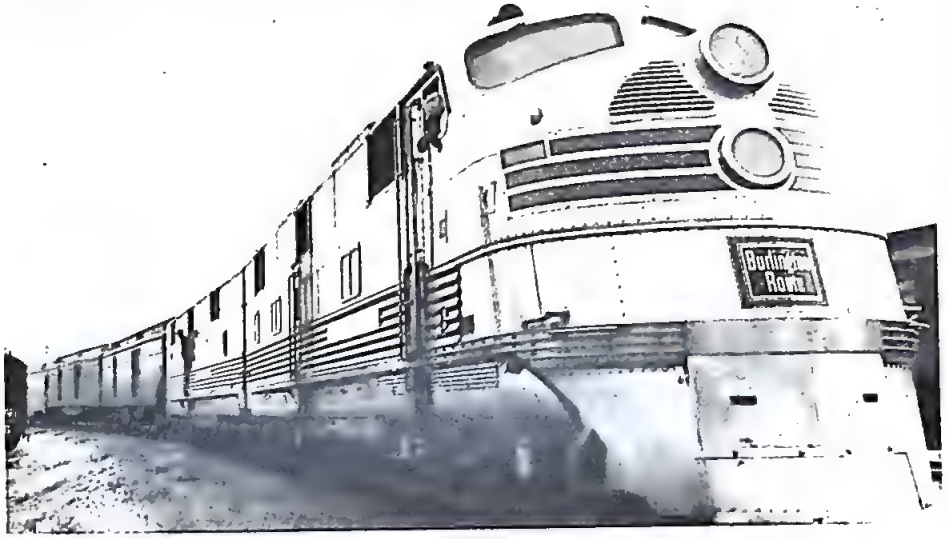
In its original paint, Atlantic Coast Line #503, lettered for the Vacationer, sits at Washington Terminal on December 7, 1940 awaiting its call for a southbound run. Gary Dolzall collection.

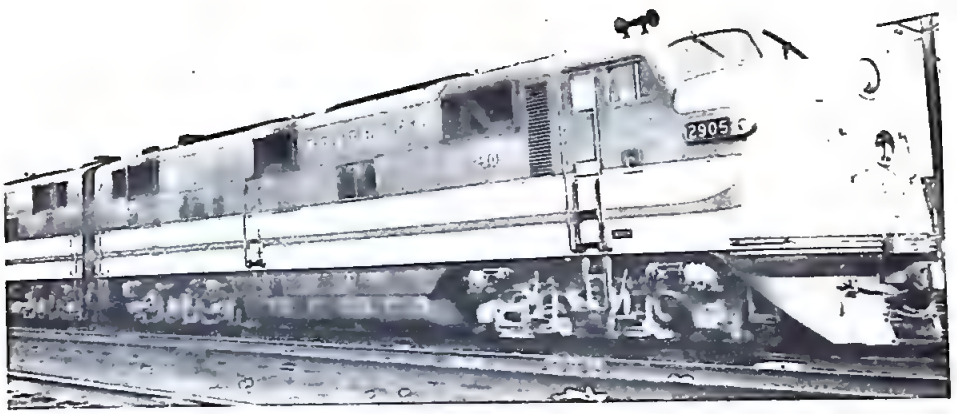


Now here's a face only a mother could love. Illinois Central had a special train, with a special power car constructed for its Chicago-St. Louis Green Diamond. Once retired, the entire train was scrapped. Gary Dolzall collection.



Burlington's E5s were modified with all-stainless steel side panels and fluting. The windows were smaller and they were to be the only slant-nose Es on the Q. #9912, the Silver Meteor, is in Denver. Gary Dolzall collection.





Decked out in its original green and white color scheme, Southern Railway E7A #2905 waits with sister #2906 at Washington, D.C. for their run south. The E7 was the most popular E with over 500 A and B units produced between 1945 and 1949. The E8 ran a close second, the E9 a distant third. EMD photo.

Frisco purchased six E7s, #2000-2005. In later years the road named all 22 of their E7 and E8 units with names of race horses. #2004, shown when new carried the name Dan Patch. Gary Dolzall collection.

#9905. The power cars, Pegasus, and Zephyrus respectively received their punch from single Winton V12s. With their larger sisters taking over, #9901 and #9902 headed south. #9901 roamed between Houston and Ft. Worth as the *Sam Houston Zephyr*. #9902 split her time between "Q" and Gulf, Mobile and Ohio rails on her St. Louis-Kansas City dash as the *Ozark State Zephyr*.

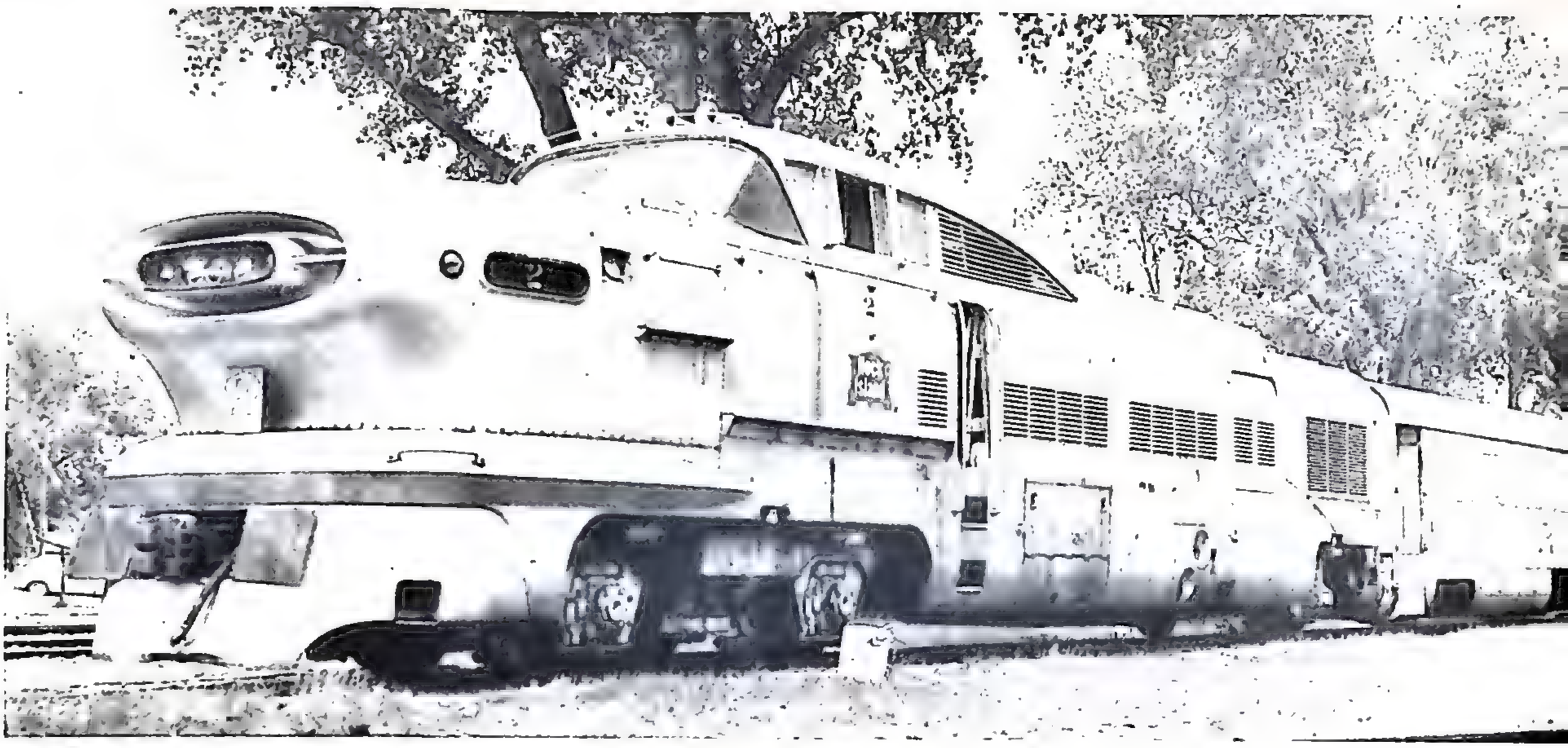
On a cold November day La-Grange's "first road locomotive" was completed, Zephyr #9906—Silver King/Silver Queen. Silver King carried two Wintons, V12s totaling 1800hp. Booster Silver Queen bore a single Winton V16 throbbing with 1200hp. #9907, christened Silver Knight/Silver Princess joined the royal family and the flashy 3000 hp combo's entered service as power for the overnight *Denver Zephyr*.

Union Pacific meanwhile filled their M-series with M-10003-M-10006. UP's latest consisted of 1200 hp cabs and boosters' presenting a smoother, more streamlined appearance than earlier Ms. Sporting eight portholes per side, UP's new Ms could be found, in 3600 hp A-B-B sets, heading up the *City of San Francisco* and *City of Denver*, the latter in direct Chicago-Denver competition with CB&Q's latest charge of Zephyrs.

Then the flurry was over, forever. The progress the articulated lightweights helped spawn was ready to pass them by. In three years Burlington would give the sleek shovel faced Zephyr one last fling, but the gap had been filled, the experiment concluded. Horsepower had risen from a meager 600 to a potent 3600. The "Boxcars" argued a strong case for the true "unit" concept.

It was time for the E unit, time for a sleek blue speedster numbered 51. By designing the first E unit, Baltimore & Ohio EA #51, Richard Dilworth set a precedent for more than 1300 passenger cabs to follow. Dilworth borrowed the basics from his boxcars, twin V12s for reliable power, and of course the unit concept. Dilworth replaced the Boxcar's B-B trucks with A1A-A1A versions for a smoother ride, and safer footing at high speeds. And the most obvious changes: a raised cab, long sloping nose and clean lines —a very handsome locomotive.

#51 began her career in May, 1937 hauling the *Royal Blue*. On June 11th she rolled off 551 non-stop miles between Cincinnati and Washington, D.C. in 12 hours. Eleven sisters eventually joined #51 (six cabs, six boosters) on the B&O, their charges; the *National Limited* and *Capitol Limited*. The EA's presence made boxcar #50 "old" at age one. Squarish #50 headed west, to the Alton, where she bore the *Abra-*



EMD produced a pair of Aerotrains in the mid-fifties. Testing on the New York Central, Pennsy and Santa Fe, one became the City of Las Vegas briefly before both were returned to EMD and sold to the Rock Island. EMD photo.

The most successful operator of Es in freight service is the Erie-Lackawanna with as many as five E8s powering mainline freights. #828 is stopped at Huntington, Indiana as a faster freight overtakes it. Gary Dolzall photo.

Not all E7s had rectangular windows on their flanks; Texas and Pacific #6 was built with portholes instead. The unit was leading an eastbound local June 7, 1967 at Shreveport, Louisiana. Gary Dolzall collection.

ham Lincoln and eventually wore number #1200 on the Gulf, Mobile & Ohio.

Just as it had been in the days of "Dilworth's Boxcars," Santa Fe was right on the heels of the B&O in the E unit race. ATSF #2 was their first, and while she carried an E1 designation, #2 was mechanically identical to B&O #51.

#2 was a cab and booster team. Together they boasted of 3600 hp, in steam terminology; 90,000 pounds of drawbar pull. Winton 201A V12s supplied the power and speed was their forte, so much in fact that the following notice was posted in #2's cab: "Diesel locomotive No. 2 must not operate at speed to exceed one hundred sixteen (116) miles per hour."

#2 headed the re-equipped *Super Chief*, knocking boxcars #1-1A to *The Chief*. With #2 came the Santa Fe *Warbonnet*, that combination of red, silver, yellow, and black that would mean quality passenger travel for 34 years.

Just as the classy E was on her way, westerner Rock Island threw a wrench in the standardization machinery. From August through October, 1937 six "mini-E units," TAs #601-606 headed west from LaGrange. Intended for *Rocket* service these "compacts" of E-unit days rode on B-B trucks and garnered their power from single Winton V16s.

It was up to the Union Pacific to reinstate the E unit, with a twist. UP's E2 became a reality in November and December of 1937. Missing was the long slanted prow, replaced by a rounded affair not unlike the earlier Ms minus grilles. The bulb nose was an E2 exclusive, all subsequent Es until after WWII would have the long, elegant slope.

There were two E2 A-B-B sets. SF1-2-3, tri-owned by UP, Chicago & North Western and Espee, powering the *City of San Francisco*. Union Pacific and Chicago & North Western again joined forces on LA-1-2-3, new power for the *City of Los Angeles*. The E2s wore yellow and brown with red trim. A nose mounted placard, outlined with black pinstripes, carried insignias of the owner roads.

The dawn of 1938 was rather quiet, at least publicly. The Santa Fe's order of 11 E1s (eight cabs, three boosters) was completed in April, and B&O's last EA departed LaGrange in June. Actually things were far from quiet within the halls of LaGrange. B&O's final EA was the last of her breed; the last Winton road power. The 567-series engine was on the eve of introduction. The Fabulous 567. Future power for FT #103, GP7 #100, SD's, switchers, and E's, the punch behind Electro-Motive through 1965.

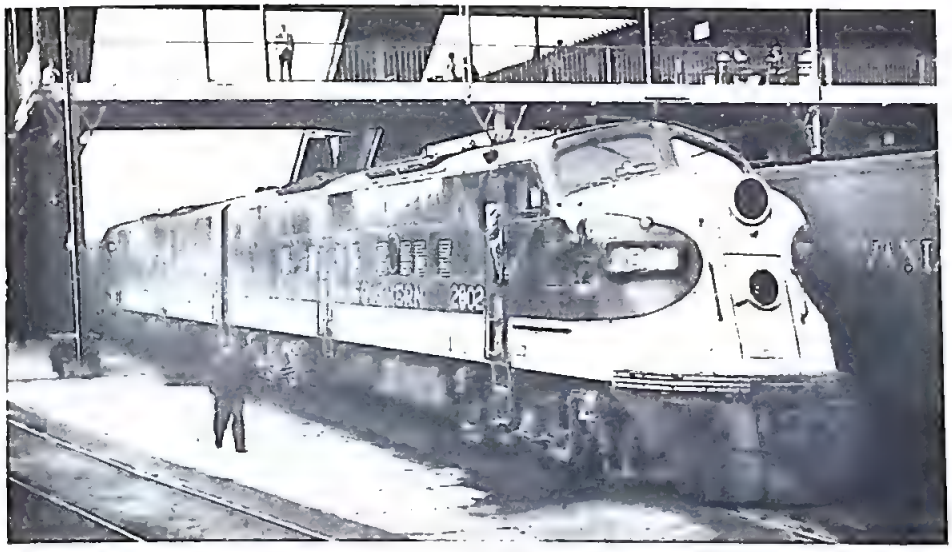
Enter E-M #822, the first E3, the first 567 powered locomotive. With recessed headlight her exterior looked much like an EA or E1. Inside she was different. For the first time the chant of 567 V12s could be heard by railfans. This first E3 was to the 567 engine what SD40 #434 was to the 645 in the 60s. Sleek #822 began her life in September, 1938; the spartan faced #434 dated 1964, but both shared a common purpose. Both served as test beds, the first road analyzation of future powerplants. Both toiled in relative obscurity.

Final checks aboard #822 confirmed the 567s abilities, as have 25,000 or so EMD's since. With #822s successes tucked in their back pocket Electro-Motive sent the first production 567s south—to the Seaboard Air Line.

SAL #3000-3100-3001, an A-B-A set headed down Dixie way in October, 1938 for a date with the *Orange Blossom Special*. Their formal name was E4, a model exclusive to the Seaboard. With the new 567s providing 2000 hp per unit, the E4s were capable of 117 mph through a 52/25 gear ratio. Cabs weighed in at approx. 300,000 pounds, boosters 10,000 pounds less. For an A-B-A set heading up the *Orange Blossom Special*, 890,000 pounds of motive power.

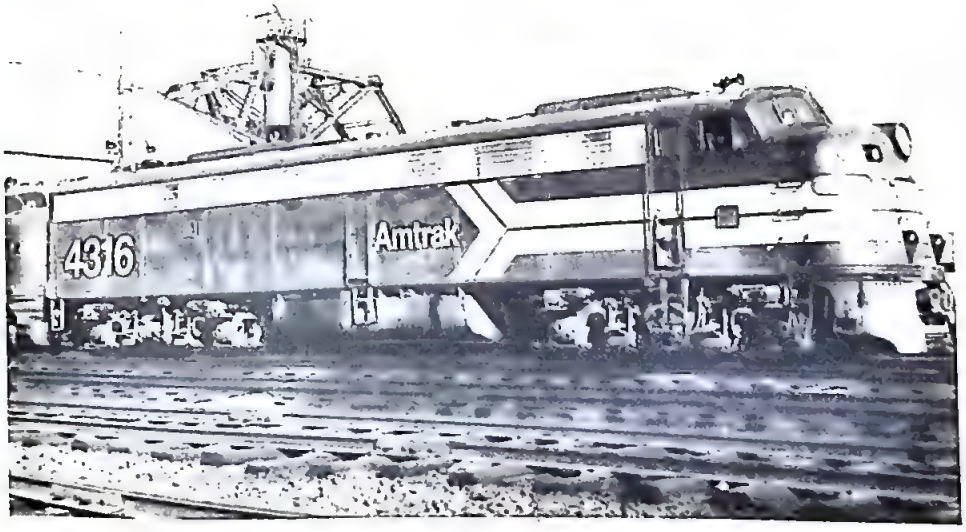
1939 was accompanied by production of the E3, E4 and the E6! C&NW/UP #LA5 and companion booster #LA6 were outshopped in March, 1939 as the first "production" E3s. Meanwhile Electro-Motive #822 lost her recessed headlight, gained the usual protruding beacon and rambled south for service on the *Southern Belle* as Kansas City Southern #1.

In April, 1939, the return of the Westwind, the final shovel nosed Zephyr for the Burlington. In truth this last Zephyr, the 9908, had as much in common with E units as she did with her Zephyr predeccessors. #9908 was powered by a single 1000



Southern E6A #2802 waits patiently with E7A #2921 at Lynchburg, Virginia with train #35 in November, 1966. Notice the non-standard portholes and that solid cast builder's plate just above the front truck. Curt Tillotson, Jr. photo.

Amtrak #4316 was the only unit painted in this experimental scheme shortly after NRPC's inception. William Raia photo.



SPEEDSTERS

hp 567 series V12, the only Zeph without Wintons in her engine room. Her front power trucks were A1A, like those which rode under Es.

The links to days past were there as well; the sleek silver lines, the slanting prow with "Burlington Route" affixed, even a rear baggage compartment like #9900. #9908 wore the name Silver Charger and like SAL's E4s she was geared for a 117 mph maximum. 144,700 pounds rested on her front truck providing the necessary adhesion to maintain her assignment: the St. Louis-Kansas City *General Pershing Zephyr.*

With Burlington's lone-passenger acquisition of 1939 delivered, E unit production again continued uninterrupted. SAL's southern rival and eventual mate, the Atlantic Coast Line, already had E3 #500 to their credit when the first E6, ACL #501, rumbled out of LaGrange.

November, 1939 thusly carries a special note; models E3, E4 and E6 all were in production, plus Q's new E5s were on order. Illustrated is the basic similarity of the early Es, the differing designations more for prestige than accuracy.

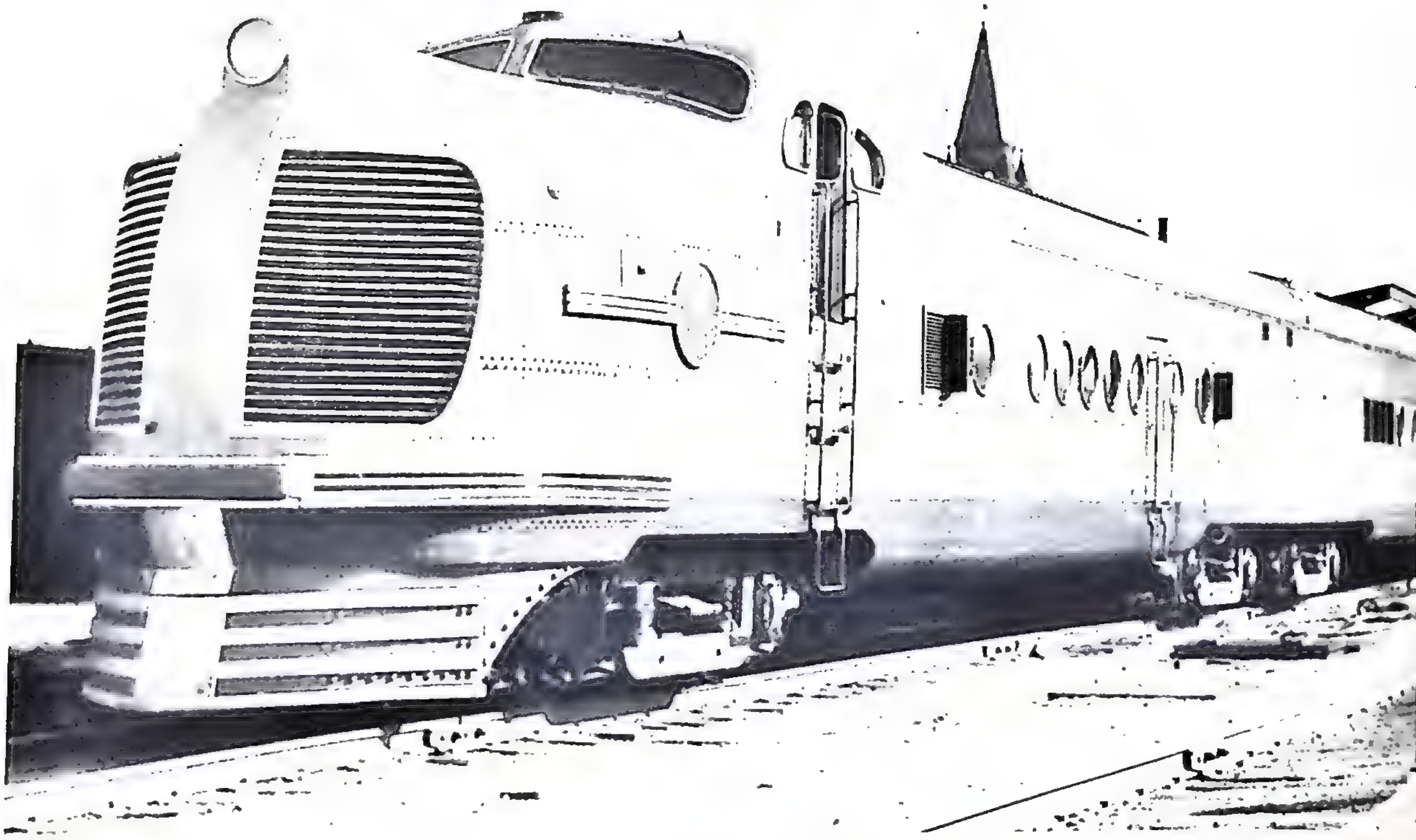
As the E4 had preceded the first production E3, deliveries of the E4 ceased first. Seaboard's last E4 departed LaGrange in December, 1939, just as the decade which gave birth to the diesel streamliner came to an end.

With the 40s came Burlington's first E units. The first E5 arrived in February and while CB&Q's latest were standard E units internally, the Burlington made sure the Zephyr aura was not lost. The E5s were decked out in silver stainless steel, which, below the side panel windows was corrugated. They wore truck skirts for sleekness and each bore a name—Silver Comet, Silver Meteor, Silver Mate, in all sixteen, eleven cabs, five boosters. Their numbers began where the Zephyrs left off, #9909 was the Silver Bullet.

The E5s silver sloping nose was patterned after the earlier Zeph's. The red and black rectangle with Burlington Route in white, simulated Zephyr grilles sprouting on each side of the top headlight, and from the lower headlight ran sets of three black stripes, as the windshield of Zephyrs, out to meet the tiny inset numberboards.

Just as Electro-Motive #822, the first E3, went to KCS, so did the last,

Reflecting the automobile styling of the times, Union Pacific #M-10004 is in charge of train #101, the City of San Francisco at Cheyenne, Wyoming on September 18, 1937. The two-unit locomotive was constructed in 1936. W. R. Osbourne photo, Gary Dolzall collection.



in June 1940 as KCS #3. In between, ATSF, ACL, RI, KCS, FEC, C&NW, MP, and UP welcomed a total of 16 cabs and two E3B boosters. Chicago & North Western was the biggest buyer, claiming four cabs plus part ownership of the LA5/6 team. Besides #LA6 the only E3B was Santa Fe #11A, companion to ATSF's lone E3A, #11. Missouri Pacific #7000, 7001 wore gray and blue and sported portholes in lieu of the usual rectangular side windows. Collectively the E3s sported every color of the rainbow.

With E5 and E6 production continuing, the Rock Island, not expressly known for orthodox diesel buying habits in the early days, returned to the E-M with standardization monkey wrench firmly in hand again. The "Rock" had opted for E3As #625, 626 in 1939 and in June, 1940, to accompany their order for E6As #627-629, R.I. asked for two B-units with cabs. What? The idea was to cleanly splice the *Rocky Mountain Rocket*. Electro-Motive's answer was a pair of 1000 hp, flat faced, AB6s, the rear engine area occupied by a baggage compartment rather than a second 567. They wore numbers #750, 751 and a Chicago departure of the Rocket would find one of the duo tucked in behind a standard E6A. At Limon, Colorado, with a wave of the magic wand, the booster turned cab and slipped off with a section for Colorado Springs while the lead E6A raced for Denver.

Rock Island's neighbor, the Missouri Pacific, got into the oddity act in August, 1940 with AA #7100. She was basically an E6A, but like RI #750, 751, baggage rather than a V12 rode in the aft section. #7100's peculiarity was further enhanced by MP's E3 inaugurated preference for portholes on the flanks. 1940 came to a close with a few new oddities about and E3 production as the only casualty.

1941 witnessed E6s heading to all parts of the nation. Newcomers Southern and Milwaukee entered the E unit congregation and old friends like Santa Fe, B&O, ACL, Illinois Central, and MoP added E6s to their growing diesel collections.

Production of Burlington's swift family of silver continued until June, when the last E5 journeyed from the bays of LaGrange. The moment had significance, for the first time only one passenger model, the E6, was in production. Standardization, with little variation, was complete and at Electro-Motive to stay.

1942 was a short passenger locomotive production year. In the end the E6s popularity fell prey, not to an improved model, but to the winds of World War II. In September of 1942 E unit production ground to a halt under the weight of War Production Board orders. The last E6, the last long and sleek shovel nosed E, was Louisville & Nashville 457B.

The verdict was in on the E6 and reports were favorable. Before production ceased, ACL, Florida East Coast, and KCS had joined L&N in purchasing E6s in 1942. The E6 had proven to be a true production model, no previous E model had topped 20 in sales, over 100 E6s rolled from LaGrange between ACL #501 and L&N #457B. Fourteen roads served as home for E6s. The first buyer, Atlantic Coast Line, was also the most prolific, stabling 28 units. The Milwaukee, and Kansas City Southern tied for the smallest E6 fleets, both housing a pair of E6As on their rosters.

More than eight of every 10 Es which would eventually exist remained unborn in September of 1942. First, there would be much needed war power. Two and a half years of FT freighters, two and a half years of diesel power for Navy combat vessels.

When the skies of the world's hostilities lightened enough for passenger locomotive production to resume it was the year 1945. Electro-Motive's new offspring was the E7. Mechanically she was much the same as her predecessor E6. A typical E7 weighted the scales at 315,000 pounds, was 71 feet 1¼ inches in length and, if geared for speed, could race her passengers at 117 miles per hour. Externally the change was there, the slicing prow had disappeared and in its place, the bulldog face of the F.

After World War II, competition was the name of the game. Alco, which had offered the only serious competition before the war in the 1940 DL109, was talking up the very talkable PA1. Baldwin, and Fairbanks-Morse joined the hunt offering varied models. The competition had limited effect though, from the first unit, B&O #64, E7 sales soared, eventually reaching 500+ units.

1945 started things off very well.

With the coming of Amtrak and the reduction of passenger trains, many Es found their way into commuter service. Burlington Northern E8A #9912 was rebuilt by Morrison-Knudsen of Boise, Idaho with a 645 prime mover and a new lease on life. Gary Dolzall photo.

GM&O and BM joined three giants, Great Northern plus New York Central and Pennsylvania, were new initiates in the E unit fan club. The train names were impressive, *The 20th Century Limited*, *Abraham Lincoln*, *Broadway Limited*, and *Empire Builder*. Central of Georgia's *Southland*, Wabash's *Bluebird*, L&N's *Hummingbird*, IC's *Panama Limited*, SP's *Sunset Limited*, and Milwaukee's *Hiawathas* to mention a few also gained E7s.

1947 may be recalled by the return of Es wearing flashy corrugated apparel. The Burlington was not the culprit this round but rather the unlikely duo of Katy and Frisco. In the early months of 1947 the southwestern neighbors received a collective batch of eight E7As. Each bore corrugated stainless steel on the lower portion of their flanks. Some of these sparkling Es wore both Frisco and Katy heralds and proudly displayed, on their bulldog snout, the name of the varnish they headed; *The Texas Special.*

Yet another E7 in corrugated dress slipped from LaGrange in 1947. Her number was #765 and she wore a medium blue. The corrugated panels, like the tail of a comet, followed a speeding red star affixed to #765s sides. A placard, red and silver in color, adorned the stout nose, a silver pilot rode low near the rails. #765 was at home everywhere, and she went everywhere, from smallish Monon to giant Union Pacific. The reason? The front placard read: "GM Train of Tomorrow."

The project which led to the *Train of Tomorrow* dated back to 1944. It began with the well-known tale of how, after riding the cab of an FT freighter in the Rockies, GM's C. R. Osborne formulated the "astrodome" idea. By late 1944 plans for a train featuring the astrodome were under the scrutiny of the GM Styling Section. Their first result, in February 1945, was a ⅛ scale model of the proposed streamliner.

The man behind the Zephyrs, Burlington's Ralph Budd seemingly knew a good thing. He promptly sent orders to Aurora; convert a streamlined coach into an astrodome. The depressed floor usually found under a dome was omitted due to construction complications, but in June 1945 "Silver Dome" left Aurora for a system-wide experiment. The eventual culmination of "Silver Dome" was the greatest vistadome train of all, the 1949 *California Zephyr.*

The Train of Tomorrow became a reality in 1947. The fluted stainless steel which began behind #765s red star ran the length of the consist-four cars. The Pullman-Standard cars shared #765s shade of blue and each flounted a dome. The first was chair car "Star Dust." It could boast of three semi-private rooms under the dome and a total capacity of 72 persons. Next came dining car "Sky View." Dining for 24 in the main dining room plus 18 dining spots up top in the dome was the order of business. Under the dome was a private room with dining for ten, in the short end of the car lay the kitchen. The third blue and silver car bore the name "Dream Cloud," appropriate, for it was a sleeper. "Dream Cloud" carried two drawing rooms forward, (the domes were offset, the short end considered front) then a dome under which rode three compartments. The remainder of the car bore eight roomettes. Bringing up the rear was round end observation "Moon Glow," it featured two lounges and, of course, a dome on top.

E7A #765 paced *The Train of Tomorrow* for a three year tour of the country. In 1950, as E8 production was beginning, the entire train was purchased by the Union Pacific where, minus fluted sides, #765 became UP #988.

As it deserved, model E7 went out in style. Southern Railway took the final E7s in 1949 and also received a totally new shimmering silver *Crescent Limited* in that same year.

In retrospect the E7 was not only the most numerically popular passenger cab of all time, but also ranked highly in variety of colorful attire. Katy's previously mentioned duo were among the most attractive. Red was their basis of color, sparkled by silver fluted sides and silver trim. A peak of yellow sprouted on top of the nose as did yellow stripes on the pilot. The finishing touch was a silver star residing under the lower headlight. Nearby resident Texas & Pacific could beckon to E7s in blue, gray and silver, sporting, as usual in the MoP family, porthole side windows.

To the north, neighbors Alton, C&EI, and Wabash each relied upon E7s in colorful liveries. Alton #101 and #101A wore maroon and red touched off by yellow striping, a scheme which can still be seen on a few of GM&O's (ICG) remaining F3s. Wabash's E7s wore deep blue, white, and gray in a most unusual pattern featuring Wabash's waving red and blue flag on the nose. Competitor C&EI also sported blue, this time sprinkled with bright orange. Forming a triangle on the nose, the orange slipped back the flanks ending in a lightning bolt pattern.

Out west, Espee dressed her E7s in three different hues. Those jointly owned with UP and C&NW wore Union Pacific's yellow, gray, and red. E7s designated for service on varnish such as the *Shasta Daylight* wore S.P.'s famous red and orange. Finally, speedsters slated for the *Sunset Limited* wore red and silver.

Back east, New York Central featured a two tone gray lightning stripe outfit, and Pere Marquette dressed their E7s in a flowing pattern of yellow, blue and gray. Central of Georgia featured E7s in a scheme not unlike B&O's livery except red striping replaced BO's gold, additionally, a set of red wings polished off CofG prows.

Perhaps the least known scheme applied to an E7 belonged to Maine Central. E7s on the MEC wore brown, gold, and gray in a style similar to Rock Island's early maroon scheme. Sprucing up the nose was a green pine tree plus the roadname. Sister road Boston & Maine's earliest E7s also wore this attire, BM's minute-man posing on the nose for decoration.

In 1949 Electro-Motive unleashed a new line of locomotives, the GP7, F7, SW7, and a new passenger diesel, the E8. There were significant changes. Internally there was a 250 hp climb over the long E3-E7 standard of 2000 hp. The E8 could boast of ac auxiliary equipment, a 26% tractive effort increase, and for the first time in an E unit, the option of dynamic braking.

Externally she was sleeker, those side panel portholes the MoP liked so well became standard. Full length stainless steel grilles made for a better appearance and helped engine room ventilation. The front number boards were contoured and inset in the car body. Underneath, the E8 carried a combination water and fuel tank, the water surrounding the fuel cell for increased safety in case of derailment.

The prototype E8 exited LaGrange in August, 1949. She wore Electro-Motive demonstrator colors and number #952. The E8 production to follow was smooth, Electro-Motive standardization at its best. There were notables, based more on where they went than mechanical or exterior peculiarities. In this regard the most recalled E8s made their departure from LaGrange in the first year of production, in December of 1949, bound for Canada. Canadian Pacific #1800-1802 wore the maroon and gray of the CP, the only Es ever sold outside the United States.

EMD demonstrator #952 became Rock Island #643. Electro-Motive additionally fielded a duo of demonstrators in the early 50s. They became Lackawanna #810, #811.

Santa Fe, a firm believer in the F in latter days, took delivery of 13 E8s in 1953/54. They were built with trade-in parts from the veteran E1s and the many times rebuilt Boxcars #1-1A. The second EA built, B&O #52, later Alton #100A, served as trade-in material for GM&O's lone E8, #100A. E8s in splendid colors continued to pour from LaGrange throughout the early fifties. Richmond, Fredericksburg, &

Potomac's blue and gray, Erie's olive and gray with yellow striping, and Frisco's shiny red and gold, complete with assigned race horse names, were only a few.

By late 1954 E8 production was coming to an end. Unfortunately the market for passenger power was dwindling as well. Consequently the E8s successor found a limited market. In review the E8 fell just short of the E7s popularity, E8 sales ending an eyelash under 500 units.

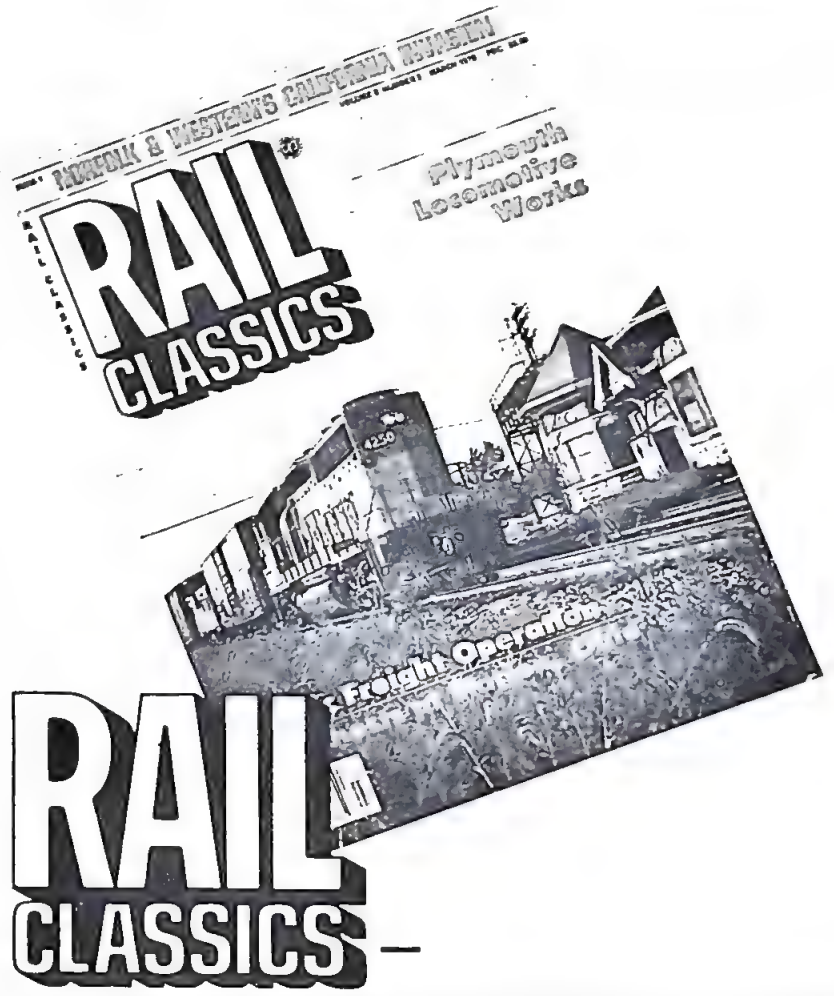
The new E9 was, in nearly every respect, identical to the E8, the one exception a final boost to 2400 hp. As the last refinement of the E unit fleet, the E9 received welcome from 11 buyers, most were old friends, B&O dated back to squarish 50 and the EAs, Burlington the Zephyrs, IC the *Green Diamond*, UP the M's, SAL the E4, SP the E2, FEC the E3, KCS the first E3, and Milwaukee the E6. Chicago & Eastern Illinois and Katy were the other E9 buyers. They had waited until the postwar years, the E7 years, to gather their first Es. Now they joined with the elder buyers as the last flag bearers, the last in excepting the E.

As the fifties continued to show passenger declines there appeared a shimmer of hope in the revival of the lightweight. Fairbanks-Morse built the P12-42 for B&M and New Haven. Baldwin gave locomotive building one last fling with the hydraulic *Explorer* and two sisters for the New Haven. Electro-Motive tried too, with the *Aerotrain* of 1955. Powered by a 1200 hp V12, the *Aerotrain* power car rode a B-1 wheel arrangement and sported a silver turret cab configuration bearing red trim. A cluster of five lights, four white, and a single red, lead off the stylish nose.

A pair of demonstrators, sometimes lettered for the temporary home road exhibited their talents on the likes of the NYC, Pennsy, and Santa Fe. A third *Aerotrain* made the Rock Island home, where it was soon joined by the ex-demonstrators. The trio would toil, mostly between Chicago and Joliet, Illinois, for the next ten years. Popularity was not exactly the word for the *Aerotrain* concept and so it remained for the E9 to end an era.

E9 production spanned 10 years and approximately 130 units. Then, one day in early 1964 production ceased. 30 years to the month after Union Pacific had taken Electro-Motive's first streamliner, the M-10000, UP received the last—E9A #914.

Today the last E wears the colors of Amtrak. She bears number #419 and operates out of ATSF base Cleburne, Texas. If one should cross paths with Amtrak #419, take a long look: she is living history, the youngest member of a great family tradition.



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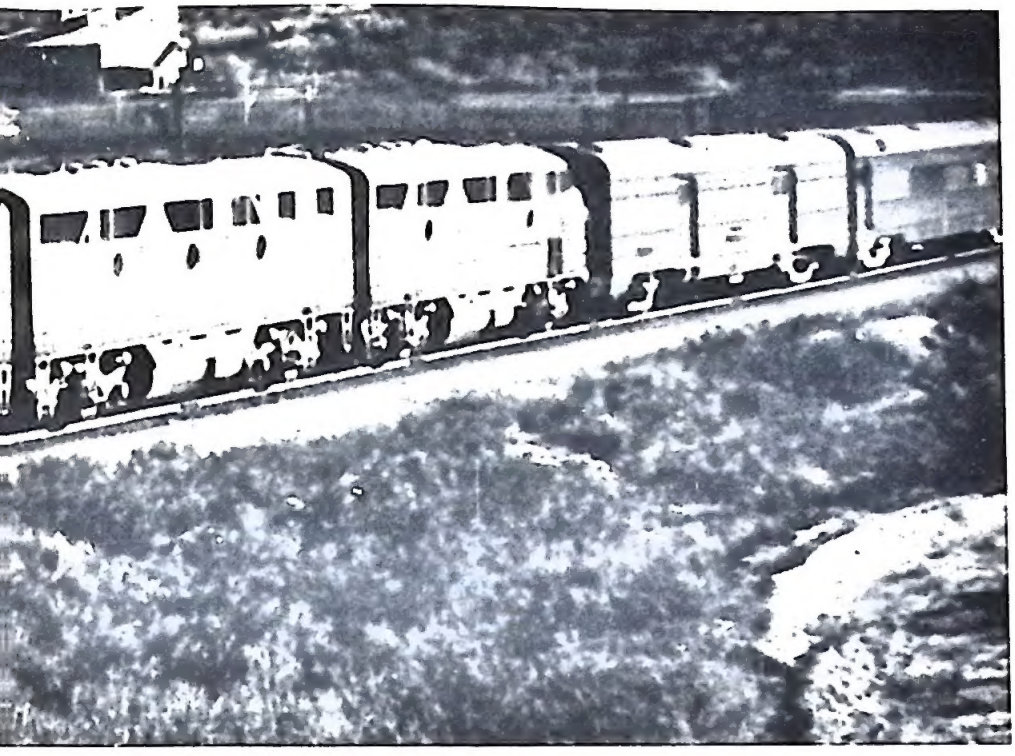
(Continued from page 63)



During the days of the early "Fs", the eastbound Chief is seen climbing through the Sullivans Curve area of Cajon Pass.

by the corn rows of western Illinois, EMD's omni-present "F" was the calling card of Santa Fe passenger service.

Thousands of miles a month passed under the rapidly thrusting wheels of each unit, seemingly unending, always as fast as tonnage and terrain would allow. For a time the "F" would even be treated to working ahead of the famous 2600 Class Northerns, themselves already rated for extinction and reduced to working the non-streamline set on short runs along the West Coast.

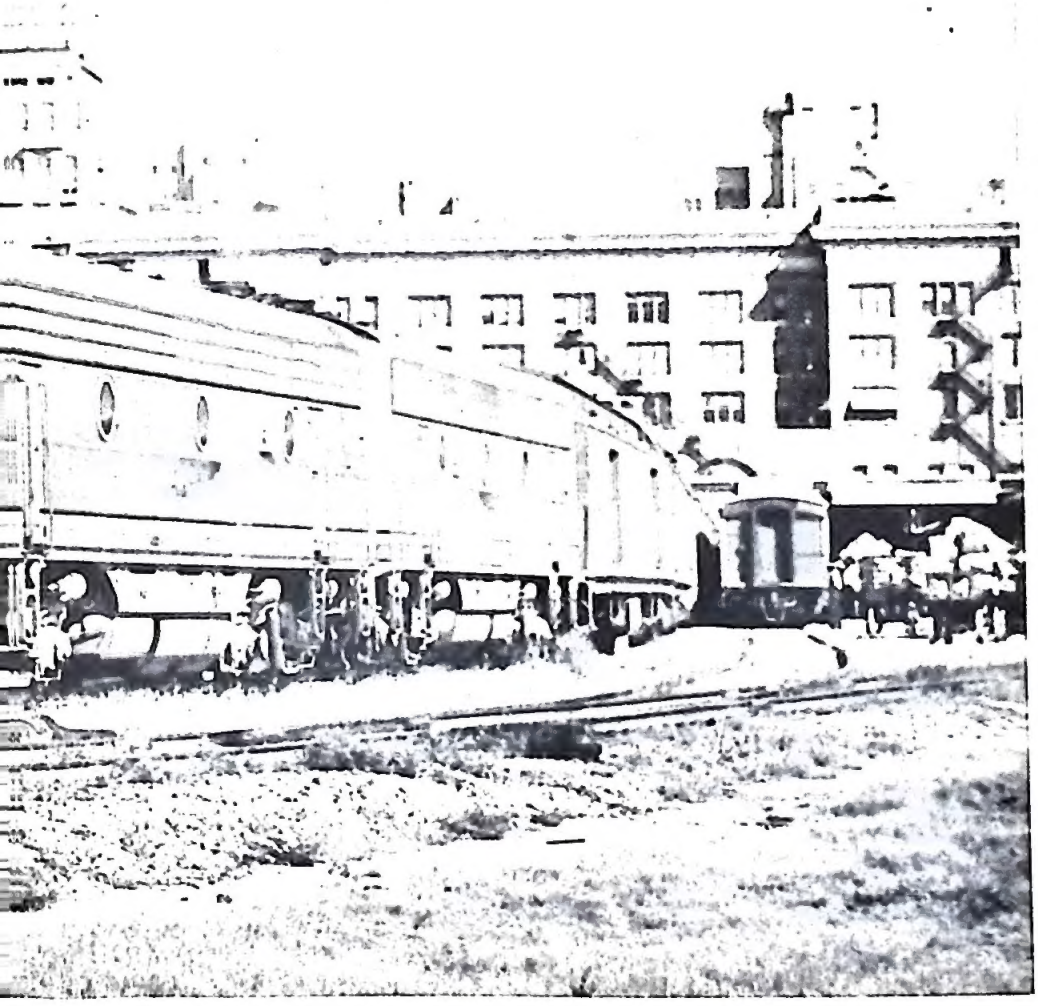
On Santa Fe's transcontinental varnish runs the passenger "Fs" had a rather long assignment, primarily based for maintenance upon Barstow, California. Between several thousand mile odysseys they routed Barstow to L.A., L.A. to Chicago and back to Barstow.

Having been thoroughly serviced, refueled, sanded, etc., a diesel passenger set emerging out of Barstow shop would be placed on a westbound schedule heading into Los Angeles or to San Francisco. Early in the diesel age the heavyweight, slower schedules heading into Los Angeles were still steam powered and frequently a westbound run would pick up diesel assistance from Barstow on. The diesel powered runs coming from the East switched units at Barstow, incoming units going to the shop for maintenance.

Power sets going west would run into Los Angeles, then return east to Chicago, Kansas City, etc. At Chicago only routine servicing was performed. Returning west to Barstow the cycle would be completed. Another power pool wandered between the California terminal and Southwest Texas destinations.

So it was that the diesel conjured the vision of a 39½ hour Chicago-Los Angeles standard that was looked upon for so long as the outstanding class in train travel. It was the basic "F," styled in paint and exposed stainless steel that was to make it seem so casual, routine and expected.

An era has come to an end. The memories it left can only be retold and retold.



The 305 is a member of a dual passenger/freight class of Fs ordered for service during 1949. Shown at Houston, Texas, Union Station.

(Continued from page 66)

and sometimes unsuccessfully—with his version of what Westerners liked to eat, but Christopher found solace in the french fries and catsup, which the waiter somehow produced from a corner of the kitchen.

After lunch we returned to our compartment, about halfway down the car, and settled in for some scenery watching. I took out my camera to get some pictures and discovered that shooting through the windows of the train wasn't going to work at all. The window panes had so many ripples that any camera angle, except one straight ahead, was distorted. I discovered that the windows raised, and spent about half the trip sitting on a small jumpseat at an open window on the other side of the car, snapping away as the spectacular scenery of China rolled past.

We continued to pound southwest to the accompaniment of the steam whistle, through the green countryside where we could see rice being transplanted by workers from nearby agricultural communes.

The scene was ever fascinating.

Late afternoon rolled into twilight on our first day aboard, with the low sun slanting orange off the surrounding mountains and the rice paddies growing dark. The long day finally was over for the commune workers who had been in the fields since dawn and who had worked at the back-breaking work of transplanting rice seedlings until darkness had ended their labors. Tomorrow, the cycle of human effort and nature's forces would begin anew to grow the rice needed for China's millions.

After night fell, we got ready for bed hoping for some sleep. It had been a long day and we were all tired.

Once in our bunks, we could see only an occasional pale yellow light winking in the distance. This is the time when one's imagination goes to work, wondering what life is really like out there on a commune where a bare bulb hangs from the ceiling and where a peasant family lives and loves and eats and sleeps in a single room.

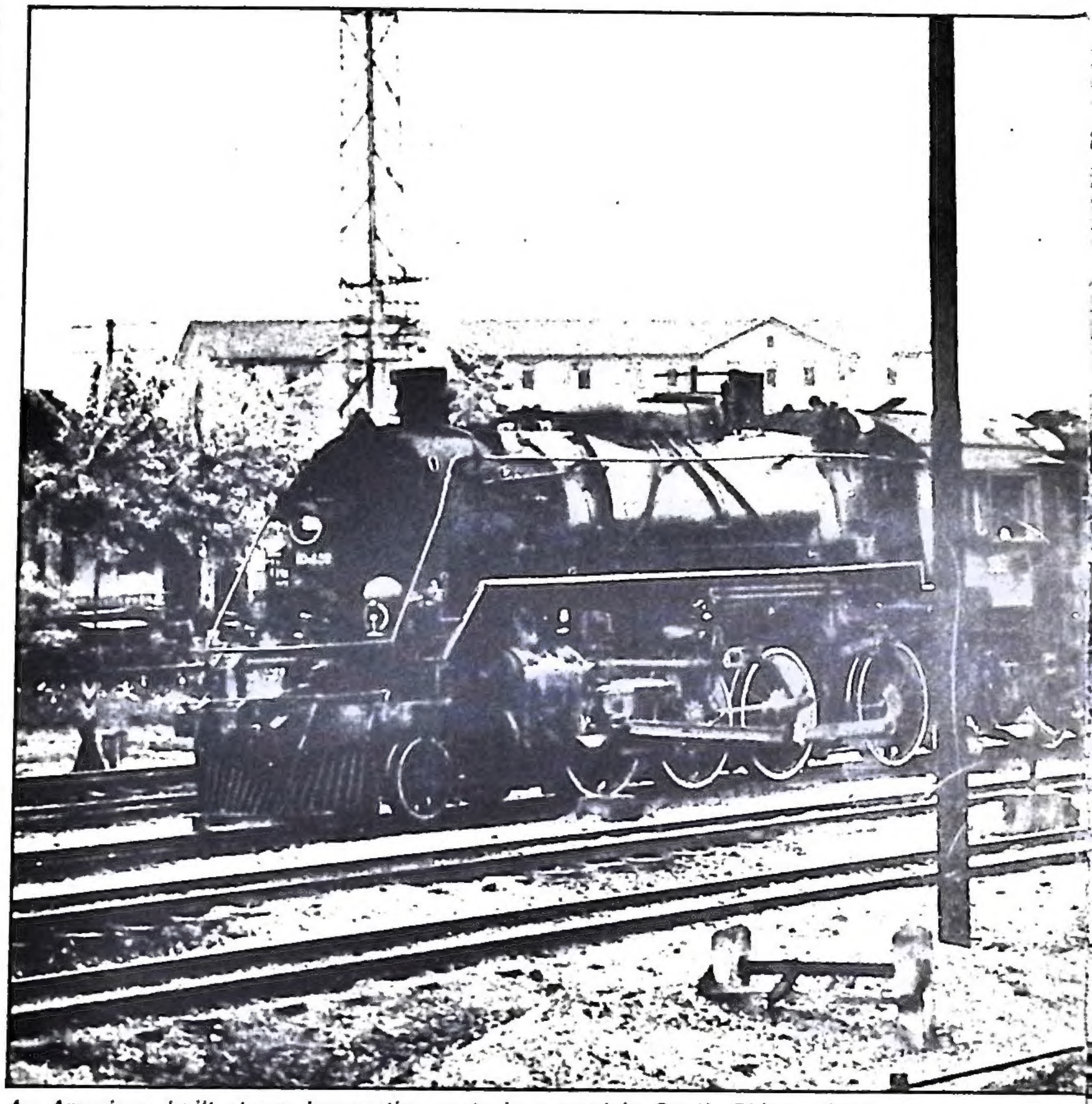
But rudimentary as the housing may be by Western standards, it is still infinitely better than it was 25 years ago when many peasants were without food, housing or medical attention, and when floods periodically ravaged the land and famine killed in the millions.

Snug in our beds, we thought of this ancient land and hoped that their lives would continue to improve.

We rolled along in relative comfort, the overhead fan keeping the room cool enough so we were able to shut the sliding door into the hall.

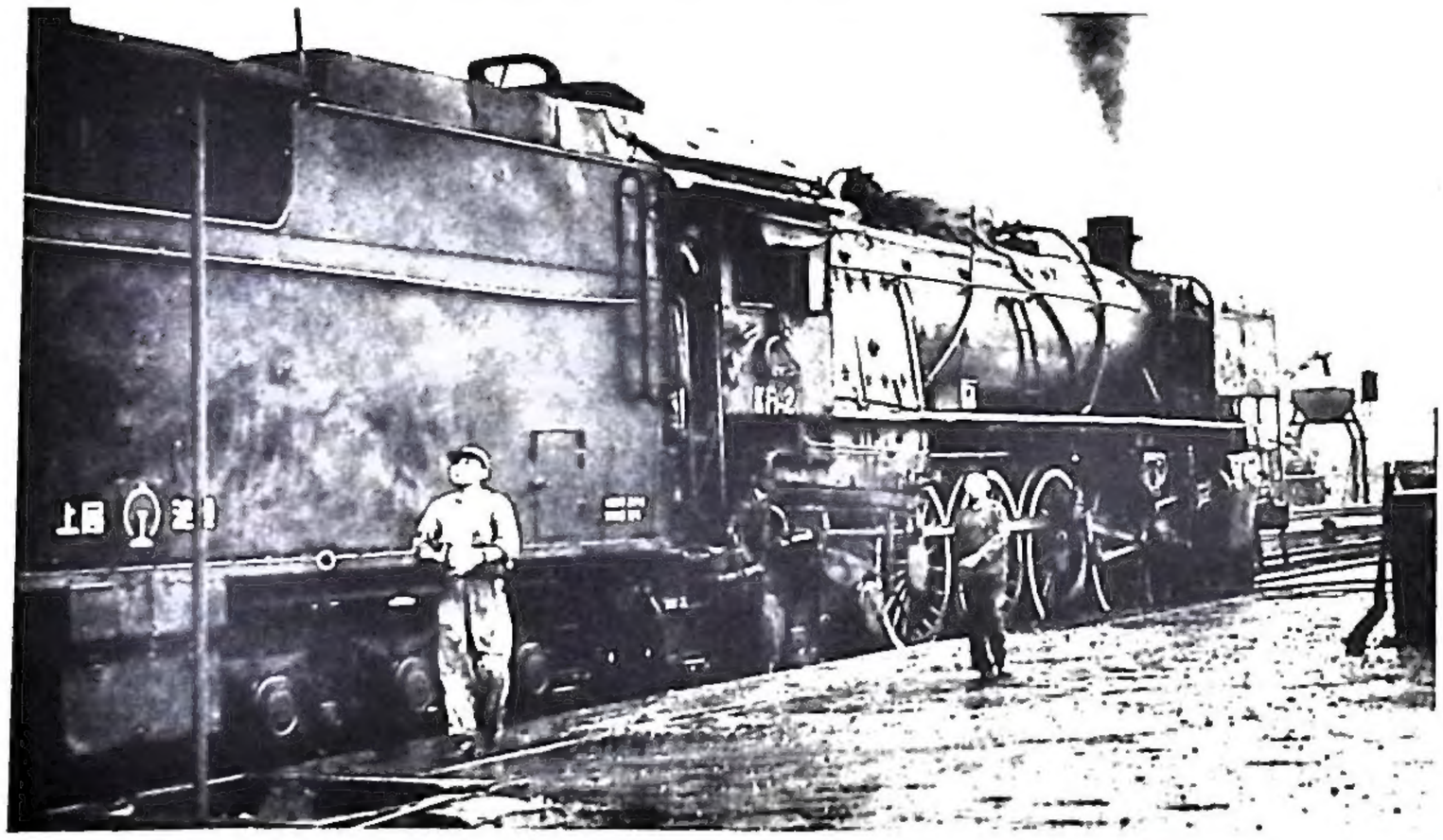
Sleep came quickly but didn't remain with us long. We awoke to stifling heat. The fan was off and so was the electricity. It wasn't until the next morning that we learned the electricity had been turned off during the night as was the common practice. But a sleeping passenger did have need of a fan, at least on a hot, muggy night such as this.

We opened the double windows to the outside, and cool night air flowed into the compartment, but so did ashes, cinders and smoke from the locomotive. When we went through tunnels, acrid smoke filled the compartment, and when we stopped at



An American built steam locomotive rests in a yard in South China. Many U.S. locomotives are still in daily service, though the Chinese are building new steam locomotives themselves.

The fireman checks over the steam locomotive while waiting at a station stop. Locos are in good mechanical condition.

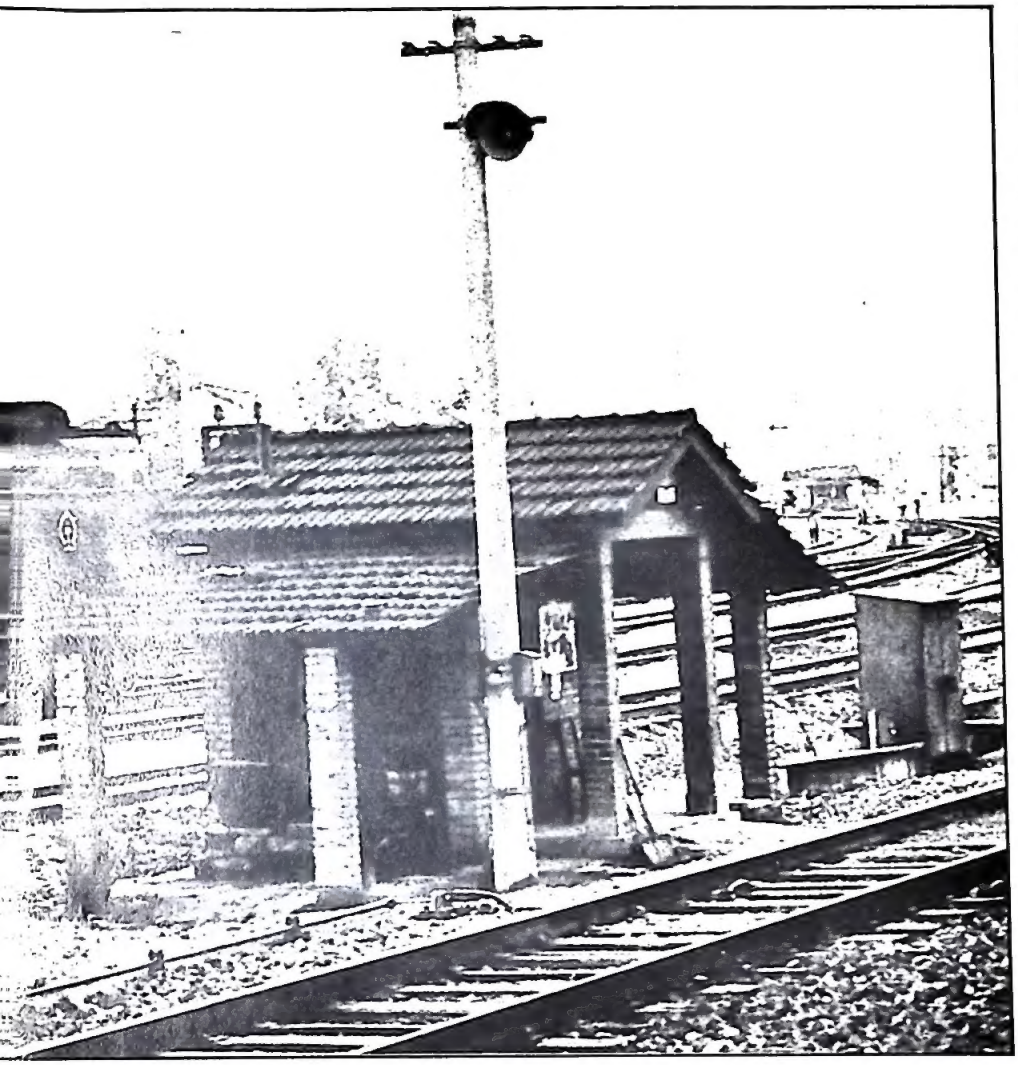


stations in the middle of the night, we were the objects of curious stares.

At dawn we discovered we were covered with a fine layer of cinders and our beds, hair and skin were speckled with black coal dust.

The toilet and washing facilities were down the hall, so we paraded one by one to rinse off the grime of the night from our faces and out of our hair.

During a stop at Chu-Chou, more than halfway to Canton, we changed engines and direction. This is a major division point, splicing together the Wu-Han—Canton and the Shanghai—Chu-Chou railroads. We had been traveling generally westward, but now turned abruptly south for the trip to Canton.



We were to change engines several times during the trip, once acquiring a diesel for a hard uphill pull through the mountains north of Canton. But for the most part we were behind steam.

It was difficult to find out just what kind of equipment was pulling us. For the most part, the station stops were short and didn't allow time to get off and inspect the head end.

Twice, however, Mr. Li told me that we would have a 10-minute stop and I jumped off the car and trotted toward the head of the train. At one stop I saw the locomotive that had brought us into the station drop its fire on the ties and chug off to the roundhouse while a fresh loco backed into place and coupled on to the lead car.

After our restless night and breakfast the second day aboard, we settled in for a morning of watching the changing scenery roll past. We were still in rice country and continued to be surrounded by mountains.

Each station stop was an adventure. When time permitted, many of the Chinese passengers would stream off the train and buy food at vendors' carts wheeled onto the platform. There were no dining facilities except in first class and for the most part only foreigners travel first class.

In the stations we could see the second and third class accommodations on adjacent trains. There was a sense of orderliness and cleanliness about them, but there definitely were no frills. The seats, in contrast to our "soft class" were made of wooden slats, somewhat on the order of park benches. These coaches seemed always crowded but their passengers seemed happy and relaxed.

Food vendors ply their wares on the station platform in South China. There are no dining facilities in second and third class.

As we neared Canton on the second afternoon; the clean-up crew swept through the coaches, changing linen and replacing the lace tablecloths. Passengers, displaced by the housekeeping, stood in the corridors idly, until a separate crew sloshed water through the passageway in frantic cleansing efforts.

"They are getting the train clean to come into Canton," Mr. Li explained. "This train belongs to the Canton Railway and they are getting it ready to come home."

We were exhausted as we stepped down into the oven-like heat of Canton. We could have flown the same distance in several hours by jet. But we wouldn't have missed this fascinating railroad adventure for the world.

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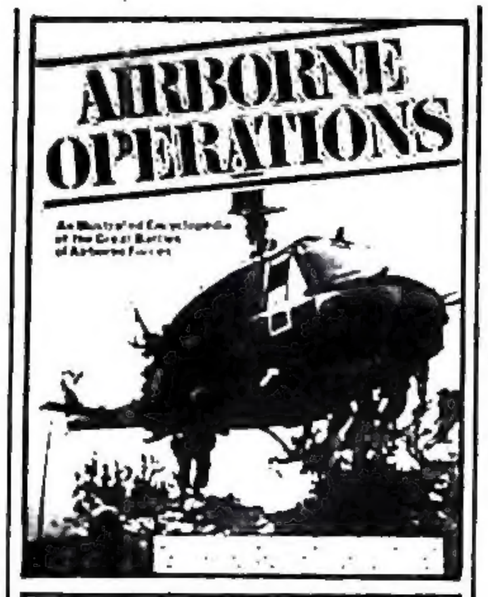

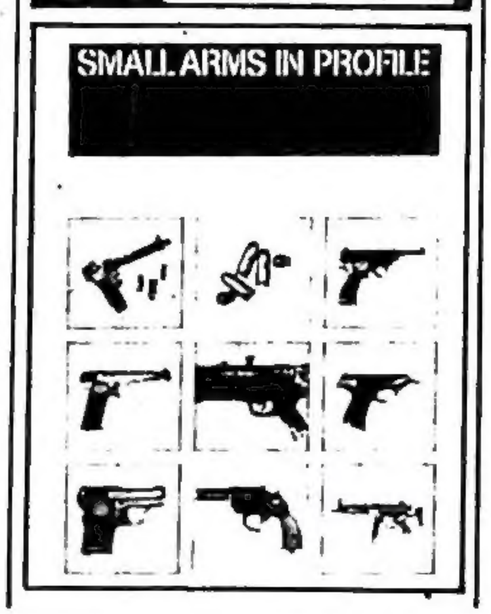

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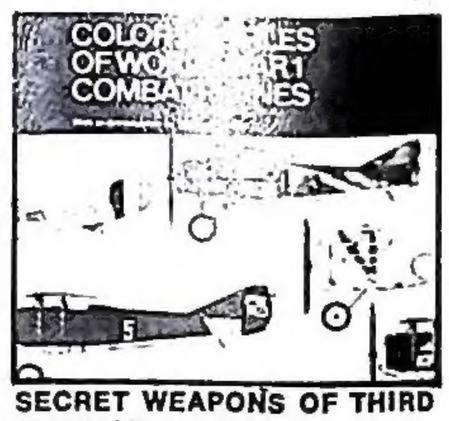

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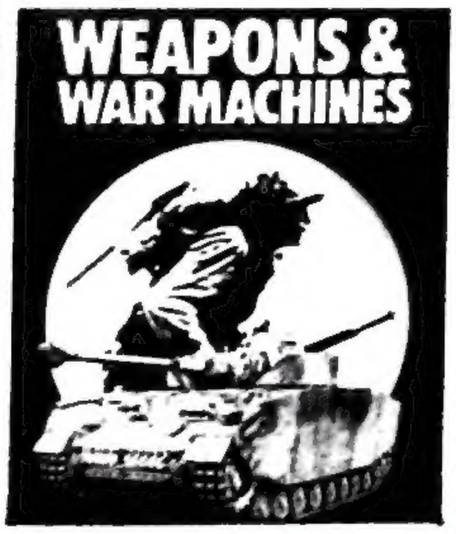

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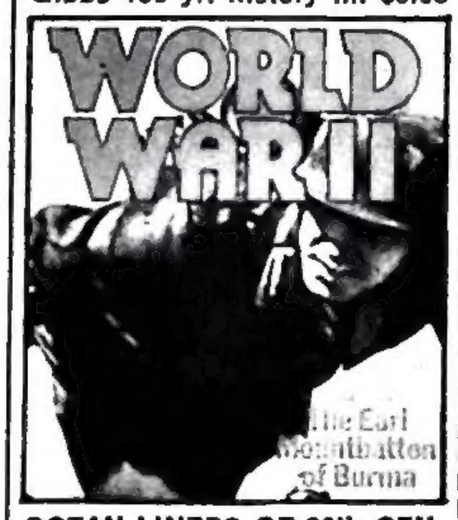

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